#### POTOMAC YARD METRORAIL STATION

APPENDIX D

# **APPENDIX D**

**Draft Special Use Permit** 

# WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

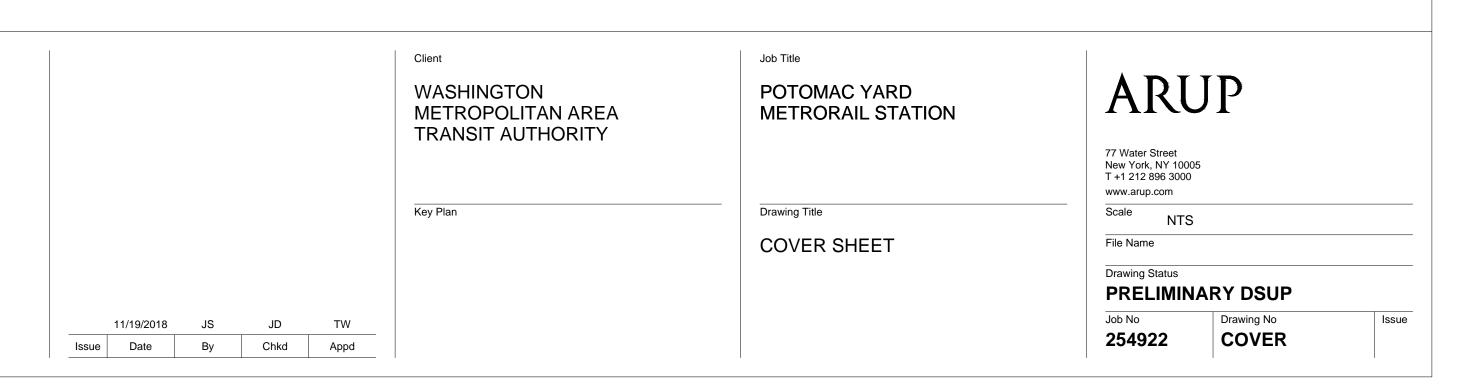


# POTOMAC YARD METRORAIL STATION CITY OF ALEXANDRIA, VA

CONTRACT FQ16146

**PRELIMINARY DSUP - #2018-0017** 





COVER SHEET

TREE SURVEY

STANDARD NOTES

STANDARD NOTES

OVERALL PARCEL PLAN

TREE SURVEY LEGEND

Crosswalks (number)

High Visibility

Public/Visitor

Private/Garage Bicycle Paths (LF)

Pedestrian Signals

Bicycle Parking (number spaces

Standard

urb Ramps

idewalks (LF)

COMPLETE STREETS TABULATION

NEW UPGRADE

**EXISTING CONDITIONS PLAN LOF 4** 

EXISTING CONDITIONS PLAN 2 of 4

EXISTING CONDITIONS PLAN 3 of 4

EXISTING CONDITIONS AND CONST. ACCESS PLAN 4 OF 4

DRAWING NUMBER SHEET NUMBER DRAWING NAME

L of 37

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3 of 37

5 of 37

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# **ZONING TABULATIONS**

PROPOSED PARCEL	PARCEL A-1A*	PARCEL 612 B1*
PROPOSED ZONING OF SITE	UT, CDD#10, 19	UT, CDD#10, 19
EXISTING USES OF SITE	PARK/WETLANDS/RAIL	POTOMAC YARD
	CORRIDOR/TRACTION	PARK
	POWER SUBSTATION	
PROPOSED USE	STATION PROPER/PED	PEDESTRIAN
	BRIDGE/AC	BRIDGE/ENTRY
	<b>BUILDING/TRACTION</b>	PAVILION
	POWER SUBSTATION	
LOT AREA MINIMUM REQUIRED	N/A	N/A
BY ZONING		
LOT AREA	6.15631 AC	0.8327 AC
NUMBER OF DWELLING UNITS	N/A	N/A
UNITS/ACRE	N/A	N/A
DENSITY	N/A	N/A
GROSS SF OF BUILDINGS	62182.00	21894.00
STATION	46922.00	N/A
AC BUILDING SF	2752.00	N/A
SOUTH PED BRIDGE/RAMP SF	6606.00	5650.00
SOUTH ENTRY PAVILLION SF	N/A	6194.00
NORTH PED BRIDGE SF	1415.00	N/A
NORTH PAVILION	N/A	10050.00
EXISTING TRACTION POWER SUBSTATION	4487.00	N/A
NET SF OF BUILDINGS	56190.00	18848.00
STATION	40930.00	N/A
AC BUILDING SF	2752.00	N/A
SOUTH PED BRIDGE/RAMP SF	6606.00	5650.00
SOUTH ENTRY PAVILLION SF	N/A	5423.00
NORTH PED BRIDGE SF	1415.00	N/A
NORTH PAVILION	N/A	7775.00
EXISTING TRACTION POWER SUBSTATION	4487.00	N/A
FAR EXISTING	0.02	0.00
FAR PROPOSED	0.39	0.31
OPEN SPACE REQUIRED	0.21	0.52
AVERAGE FINISH GRADE - STATION	18.75	N/A
AVERAGE FINISH GRADE - AC	29.00	N/A
ROOM	20.00	
BUILDING HEIGHT - STATION	50.00'	N/A
BUILDING HEIGHT - AC ROOM	26.20	N/A
BUILDING HEIGHT - ENTRY PAVILION	N/A	35.50
BUILDING SETBACKS	N/A	N/A
REQUIRED	NO	
FRONTANGE REQUIRED	N/A	N/A
PARKING SPACES REQUIRED	N/A	N/A
PARKING SPACES PROPOSED	N/A	N/A
LOADING SPACES REQUIRED	N/A	N/A
AND PROPOSED	NI/A	NI/A
TRIP GENERATION METHOD	N/A	N/A

\* SEE PRELIMINARY SUBDIVISION IDENTIFICATION OF PROPOSED PARCELS

# AREA TABULATIONS

AREA TABULATIONS

EXISTING IMPERVIOUS	2.83 AC
PROPOSED IMPERVIOUS	3.81 AC
LIMITS OF DISTURBANCE	13.00 AC

RPA DESCRIPTION	EXISTING	PROPOSED
WITHIN RPA	1.92 AC	1.92 AC
WITHIN RPA+50'	3.73 AC	3.73 AC
WITHIN RPA+100'	5.45 AC	5.45 AC
IMPERVIOUS WITHIN RPA	0.05 AC	1.35 AC
IMPERVIOUS WITHIN RPA+50'	0.45 AC	2.63 AC
IMPERVIOUS WITHIN RPA+100'	1.28 AC	3.57 AC
PERVIOUS WITHIN RPA	1.87 AC	0.57 AC
PERVIOUS WITHIN RPA+50'	3.28 AC	1.1 AC
PERVIOUS WITHIN RPA+100'	4.17 AC	1.88 AC

# OWNER

CITY OF ALEXANDRIA 301 KING STREET **ALEXANDRIA VA 22314** 

# DEVELOPMENT PRELIMINARY SITE PLAN

# POTOMAC YARD METRORAIL STATION

CITY OF ALEXANDRIA, VIRGINIA PRELIMINARY DSUP #2018-0017

## SITE PLANS

- 1. THE PROJECT IS NOT LOCATED IN A COMBINED SEWER AREA.
- 2. SEE DRAWING NO. C-05 THROUGH C-09 FOR BMP AND STORM WATER MANAGEMENT REQUIREMENTS AND MITIGATION SOIL AND/OR GROUNDWATER CONTAMINATION: SEE THE POTOMAC
- YARD METRORAIL STATION DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) DATED APRIL, 2015. 4. THE PROJECT WILL NOT EXCEED 10,000 GPD OF SANITARY FLOWS.

# SANITARY FLOW ANALYSIS

Part of building any new occupiable structure that connects to the City of Alexandria sanitary sewer is determination of the sewage generated by the building and its occupants so the City can determine if the sanitary sewer system will be over-burdened by the new demands. The City of Alexandria has issued Memorandum to Industry No. 06-14 that describes the necessary calculation methodology for standard building types in order to determine the average daily design flow. Using the guidance the City of Alexandria, the flow analysis is based on the Virginia Administrative Code 9VAC-25-790-460, Table 3 for Interstate Rest Area as a comparable building type, and is as follows:

Discharge facility <sup>(1)</sup>	Contributing Design Units	Flow gpd	BOD <sub>5</sub> #day	S.S. #day	flow duration hours
nterstate rest areas	Per person	5	0.01	0.01	24

To determine the number of persons who are anticipated to use the facilities, the prime contributor to the sewage generation of the Station, the assumption on frequency of usage applied:

The annual station ridership has been approximated as 5,000 riders per day for opening year 2020. The future anticipated ridership in 2040 is anticipated to be 13,200 riders per day. Of these riders, it is assumed that only of 5% will use the toilet room facilities because historically, the public refrains from using toilet facilities in such high-volume public spaces. Therefore:

13,200 persons per day x 5% = 660 persons per day

660 persons per day x 5 gallons per day = 3,300 gallons per day (GPD)

# WMATA LOW DISTORTION PROJECTION SYSTEM

# Washington Metropolitan Area Transit Authority (WMATA)

Low Distortion Projection (LDP) Coordinate System Definition The WMATA Coordinate System was designed such that linear distortion is minimized throughout the existing and proposed WMATA service area. The magnitude of linear distortion does not exceed 20 parts per million (0.1 foot per mile) along WMATA rail lines at the topographic surface of the Earth or in tunnels. Therefore actual "ground" distances measured between points will equal grid "maps" distances between the same points to within ±0.1 foot per mile everywhere within the WMATA system. The approximate WMATA system hub was used for the WMATA Coordinate System central meridian.

Although this essentially minimizes convergence angles for the existing WMATA system, it does not

minimize convergence angles for proposed additions to the system. Linear unit: U.S. survey foot (sft)

Note: 1 sft = 1200 / 3937 meter ≈ 0.304 800 609 601 219 202 438 meter

1 sft = 1.000 002 international feet

Geometric reference system (geodetic datum): North American Datum of 1983 (NAD 83) Datum realization (datum tag): NAD 83 (2011) epoch 2010.00 realization of the US National Spatial Reference System (NSRS).

Map projection: Lambert Conformal Conic (single parallel)

Projection parameters (single parallel definition)

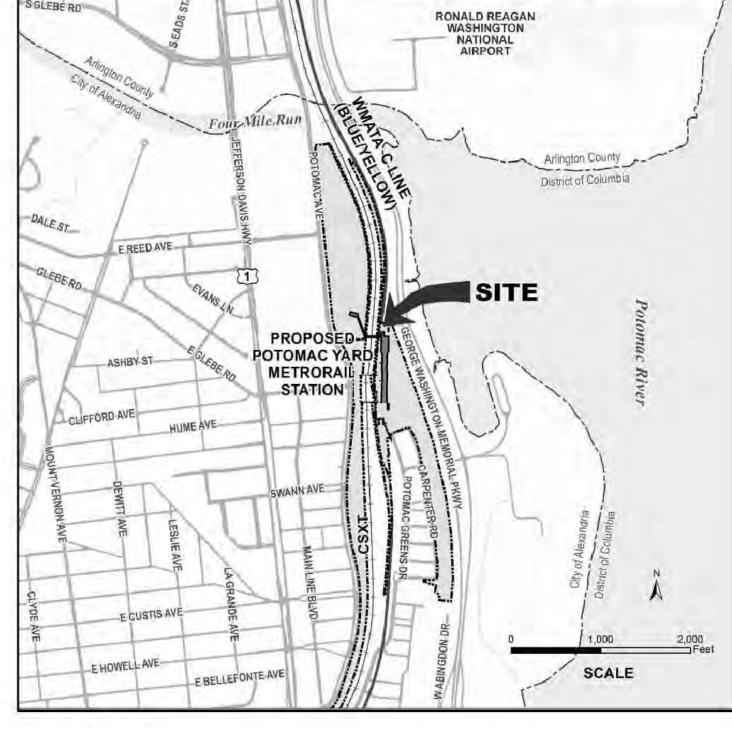
Standard parallel (latitude of grid origin): 38° 50′ 00.00000″ N (≈ +38.833 333 333 333 333 ...°) Longitude of central meridian: 77° 02' 00.00000" W (≈ -77.033 333 333 333 333...\*) 150,000.000 sft (≈ 45,720.091 440 182 880... m) False northing (at grid origin): False easting (at central meridian): 200,000,000 sft (≈ 60,960,121 920 243 840,...m) Standard parallel scale factor: 1.000 000 000 (exact)

Projection parameters (alternate generic double parallel definition)

Latitude of north standard parallel 38° 50' 00,00000" N (= +38.833 333 333 333 333 ...") Latitude of south standard parallel: 38° 50' 00.00000' N (≈ +38.833 333 333 333 333 ...°) Latitude of grid origin: 38° 50' 00.00000" N (= +38.833 333 333 333 333 ...°) Longitude of central meridian: 77° 02' 00.00000" W (≈ -77.033 333 333 333 333...°) False northing (at grid origin): 150,000.000 sft (≈ 45,720.091 440 182 880... m) 200,000.000 sft (≈ 60,960.121 920 243 840... m) False easting (at central meridian): Additional scale applied at grid origin: 1.000 000 000 (exact)

Note: The alternate "double parallel" definition is used in some software packages, such as ESRI products, rather than the single parallel definition. Both definitions yield identical results.

## VICINITY MAP



# NARRATIVE

DSUP 2018-0017 IS AN AMENDMENT TO DSUP 2016-004

THE PROJECT CONSISTS OF CONSTRUCTION OF A NEW METRORAIL STATION AND ANCILLARY FACILITIES LOCATED AT POTOMAC YARD WITHIN THE CITY OF ALEXANDRIA ALONG THE EXISTING METRORAIL BLUE AND YELLOW LINES BETWEEN THE RONALD REAGAN WASHINGTON NATIONAL AIRPORT STATION AND THE BRADDOCK ROAD STATION. THE PROJECT WILL INCLUDE THE METRORAIL STATION, A PEDESTRIAN AND BICYCLE BRIDGES WITH ACCOMPANYING ACCESSIBLE RAMP, AND AN ENTRY PAVILLION. THE PROJECT WOULD SERVE EXISTING NEIGHBORHOODS AND RETAIL CENTERS AS WELL AS HIGH-DENSITY, TRANSIT-ORIENTED DEVELOPMENT PLANNED BY THE CITY OF ALEXANDRIA. THE PROJECT WOULD PROVIDE ACCESS TO THE REGIONAL METRORAIL SYSTEM FOR THE U.S. ROUTE 1 CORRIDOR OF NORTH ALEXANDRIA.

SEE SHEETS G-01A AND G-01B FOR ADDITIONAL NOTES PERTAINING TO CITY OF ALEXANDRIA SITE PLAN APPROVAL AND PROJECT REQUIREMENTS.

	SD-01	11 of 37	PRELIMINARY SUBDIVISION PLAT LOF 4
AND CONTROL OF THE PARTY AND	SD-02	12 of 37	PRELIMINARY SUBDIVISION PLAT 2 OF 4
REQUIRED APPLICATIONS	SD-03	13 of 37	PRELIMINARY SUBDIVISION PLAT 3 OF 4
	SD-04	14 of 37	PRELIMINARY SUBDIVISION PLAT 4 OF 4
DEVELOPMENT SPECIAL USE PERMIT	C-01	15 of 37	SITE PLAN 1 OF 3
2. REZONING TO UT - UTILITIES AND TRANSPORTATIO	C-02	16 of 37	SITE PLAN 2 OF 3
ZONE	C-03	17 of 37	SITE PLAN 3 OF 3
3. SPECIAL USE PERMIT - BUILDING HEIGHT UP TO 50	C-04	18 of 37	STORMWATER MANAGEMENT PLAN
FEET	C-04A	19 of 37	STORMWATER MANAGEMENT DETAILS
4. SPECIAL USE PERMIT - FAR UP TO 0.50	C-05	20 of 37	EXISTING DRAINAGE PLAN
5. MASTER PLAN AMENDMENT	C-06	21 of 37	PROPOSED DRAINAGE AREA PLAN
	C-06A	22 of 37	PROPOSED BMP PLAN
FLOODPLAIN NOTES	C-07	23 of 37	STORMWATER MANAGEMENT CALCULATIONS 1 OF 2
T STATE OF THE PERSON OF THE PERSON OF THE	C-08	24 of 37	STORMWATER MANAGEMENT CALCULATIONS 2 OF 2
1. THE SITE LIES WITHIN 100-YEAR FLOOD PLAIN		25 of 37	SITE CROSS SECTIONS
WATER SURFACE ELEVATOIN (WSE) AND THE	C-10	26 of 37	WETLANDS RESTORATION PLAN
100-YEAR FLOOD PLAIN WSE IS SHOWN ON THE		27 of 37	MEZZANINE LEVEL FAR CALCULATION
SITE PLAN PER THE DEMARCATION OF THE	M=U/	28 of 37	PLATFORM LEVEL FAR DIAGRAM
CURRENT FLOOD INSURANCE RATE MAP (FIRM	A-03	29 of 37	STATION FLOOR PLANS
PUBLISHED BY THE FEDERAL EMERGENCY	Λ-04	30 of 37	ENTRANCE PAVILION
MANAGEMENT AGENCY (FEMA).  2. THE PLANS WILL COMPLY WITH THE CONDITIONS	A-05	31 of 37	BUILDING ELEVATIONS
OF SITE PLAN APPROVAL.	A-06	32 of 37	BUILDING ELEVATIONS AND SECTIONS
OF SHE FEAN AFFROVAL.	A-06A	33 of 37	ENTRANCE PAVILION ELEVATIONS
DDA MOTEO	A-06B	34 of 37	GLEBE PAVILION
RPA NOTES	Λ-07	35 of 37	OVERHEAD PERSPECTIVE
	Δ-08	36 of 37	ILLUSTRATIVE PLAN
1. THE SUBJECT PROPERTY LIES WITHIN A CITY OF		37 of 37	ILLUSTRATIVE VIEWS

G-01A

G-01B

G-02

EX-01

EX-02

EX-03

EX-04

EX-05

EX-03A

RESOURCE PROTECTION LINES ARE SHOWN ON THE SITE PLAN. 2. SEE AREA CALCULATIONS AND STORMWATER CALCULATIONSFOR FURTHER DETAIL.

ALEXANDRIA RESOURCE PROTECTION AREA (RPA) FIELD DEMARCATED/VERIFIED 50 FEET AND 100 FEET

# **DESIGN GUIDELINES**

- 1. THE PROPOSED PROJECT IS LOCATED WITHIN THE OLD AND HISTORIC ALEXANDRIA DISTRICT AND THE ALEXANDRIA HISTORIC DISTRICT DESIGN GUIDELINES APPLY.
- 2. THE PROPOSED PROJECT IS LOCATED WITHIN THE POTOMAC YARD/POTOMAC GREENS SMALL AREA, THE POTOMAC YARD URBAN DESIGN GUIDELINES APPLY.

# SOIL INFORMATION

GEOTECHNICAL INFORMATION PROVIDED IN THE BORING LOGS OF THE ORIGINAL CONSTRUCTION OF THE BLUE/YELLOW LINE, PERFORMED IN 1977, DO NOT DETECT OR MAKE REFERENCE TO MARINE CLAYS. ADDITIONALLY, THE MARINE CLAY AREAS MAP PREPARED BY THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR THE CITY OF ALEXANDRIA, 1976, DO NOT DETECT OR MAKE REFERENCE TO MARINE CLAYS IN THE IMMEDIATE AREA AFFECTED BY CONSTRUCTION OF THE POTOMAC YARD STATION.

# **EXISTING CONDITIONS PLAN NOTES**

- 1. THE PROJECT IS LOCATED IN AN AREA OF KNOWN CONTAMINATION. AS SUCH, REQUISITE ENVIRONMENTAL INVESTIGATIONS AND REPORTS BE REQUIRED NO LATER THAN DURING THE FINAL SITE PLAN, WHICH INCLUDES BUT NOT LIMITED TO, SUBSURFACE SITE INVESTIGATION (PHASE II), SOIL REMEDIATION PLAN, HEALTH AND SAFETY PLAN, AND THE DESIGN AND INSTALLATION OF A VAPOR BARRIER. INITIAL AIR MONITORING WILL BE REQUIRED, AND CONTINUATION DURING CONSTRUCTION WILL BE CONTINGENTUPON MONITORING DATA.
- SOILS INFORMATION: GEOTECHNICAL INFORMATION PROVIDED IN THE BORING LOGS OF THE ORIGINAL CONSTRUCTION OF THE BLUE/YELLOW LINE, PERFORMED IN 1977, DO NOT DETECT OR MAKE REFERENCE TO MARINE CLAYS. ADDITIONALLY, THE MARINE CLAY AREAS MAP PREPARED BY THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR THE CITY OF ALEXANDRIA, 1976, DO NOT DETECT OR MAKE REFERENCE TO MARINE CLAYS IN THE IMMEDIATE AREA AFFECTED BY CONSTRUCTION OF THE POTOMAC YARD STATION.
- 3. THE NORTH MERIDIAN AND HORIZONTAL CONTROL ARE BASED ON THE WMATA 2009 LOW DISTORTION PROJECTION SYSTEM. VERTICAL DATUM IS NAVD 88.

# CO-APPLICANT

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA) 600 FIFTH STREET N.W. WASHINGTON DC, 20001

# CONSULTANT/ARCHITECT TO WMATA

DB Final Design: Leuterio Thomas, LLC 6710 Oxon Hill Road, Suite 310 National Harbor, MD 20745

DB Bridging Documents: KGP DESIGN STUDIO 1777 CHURCH ST NW WASHINGTON DC 20036

# **APPLICANT**

CITY OF ALEXANDRIA 301 KING STREET **ALEXANDRIA VA 22314** 

# CONSULTANT/ENGINEER TO WMATA

DB Final Design: **DB** Bridging Documents: ARUP AECOM 77 Water Street 2101 WILSON BLVD New York, NY 10005 **ARLINGTON VA 22201** 

DIRECTOR		DATE	
DEPARTMENT OF TRAN			IENTAL SEI
DIRECTOR		DATE	
CHAIRMAN, PLANNING COM	MISSION		ATE



Job Title WASHINGTON POTOMAC YARD METROPOLITAN AREA METRORAIL STATION TRANSIT AUTHORITY Drawing Title Key Plan **COVER SHEET** SHEET 1 OF 38 JD Issue Date By Chkd

APPROVED

77 Water Street New York, NY 10005 T +1 212 896 3000 www.arup.com N.T.S. File Name **Drawing Status** PRELIMINARY DSUP

254922 G-01

- VERTICAL DATUM\* NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88. 2. UTILITY INFORMATION, AS SHOWN ON THIS PLAN IS TAKEN FROM THE RECORDS AND/OR FIELD SURVEY COMPLETED BY MERCADO CONSULTANTS, INC., DATED 01/2016,AND CANNOT BE GUARANTEED. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777 AND 811, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION. THE CONSTRUCTION WORKERS AND CONTRACTOR(S) ARE ENCOURAGED TO VISIT DOMINION VIRGINIA POWER WEB SITE AT:
- www.dom.com (KEYWORD SAFETY) FOR ADDITIONAL SAFETY INSTRUCTIONS. 3. LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR/ENGINEER SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS
- 4. THE BOUNDARY INFORMATION FOR THE SUBJECT SITE IS BASED ON A CURRENT FIELD SURVEY PREPARED BY A. MORTON THOMAS & ASSOCIATES, INC., DATED 03/2016 IN ACCORDANCE WITH THE REQUIREMENTS OF VIRGINIA ASSOCIATION OF LAND SURVEYORS

\*PER MEMORANDUM TO INDUSTRY, JULY 20, 2005; THE PLAN SHALL BE PREPARED USING VIRGINIA STATE PLANE (NORTH ZONE) COORDINATES BASED ON NAD83 AND NAVD88; HOWEVER, IF THE CURRENT DRAWINGS ARE PREPARED USING NORTH AMERICAN DATUM OF 1927 (NAD27) AND NORTH GEODETIC VERTICAL DATUM OF 1929 (NGVD29), THEN THE AS-BUILT DRAWINGS SHALL PROVIDE A CONVERSION TABLE OF SANITARY AND STORM SEWER DATA IN THE NAD83 AND NAVD88 DATUMS.

#### CITY STANDARD GENERAL NOTES

- 1. THE SUBJECT SITE IS LOCATED ON CITY OF ALEXANDRIA ASSESSMENT TAX PARCELS 025.02-01-36 AND 025.04-03-01.
- 2. OWNER: CITY OF ALEXANDRIA. 3. FINAL DEED BOOK IS TO BE DETERMINED UPON APPROVAL OF COMBINED PROPERTIES THAT WILL COMPROSE PROPOSED LOT A-1A AND 612 B1
- 4. ADDRESS IS NOT YET DETERMINED
- AREA TABULATION (SEE SHEET G-01 FOR AREA TABULATIONS).
- THE NATURAL SOILS AT THE SITE CONSIST OF KEYPORT SILT LOAM AS DESDXCRIBED IN THE NVPDC FROM U.S. Department of Agriculture. Soil Survey of Fairfax and Alexandria Counties, Virginia. ADDITIOANL GEOTECHNICAL STUDIES WIL LBE PERFORMED PRIOR TO FINAL SITE PLAN APPROVAL FROM THE CITY OF ALEXANDRIA.
- THE SITE IS LOCATED IN THE FOUR MILE RUN/POTOMAC RIVER A12 WATERSHED.
- CONSTRUCTION PERMITS ARE REQUIRED FOR THIS PROJECT. THE APPROVED SITE PLAN MUST BE ATTACHED TO THE PERMIT APPLICATION THAT FULLY DETAILS THE CONSTRUCTION AS WELL AS LAYOUTS AND SCHEMATICS OF THE MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.
- 9. ALL PUBLIC AND PRIVATE EASEMENTS OR ALL KNOWN PUBLIC AND PRIVATE EASEMENTS, INCLUDING ALL UTILITY, EGRESS, AND CONSERVATION RESTRICTIONS ARE SHOWN. THE APPLICANT SHALL NOT CONSTRUCT ANY PERMANENT STRUCTURES OVER ANY EXISTING OR PROPOSED PUBLIC AND/OR PRIVATE EASEMENTS UNLESS OTHERWISE APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
- 10. PLAT SUBJECT TO RESTRICTIONS OF RECORD.
- 11. BUILDING HEIGHT SHALL NOT EXCEED THE ALLOWABLE LIMIT BY CITY OF ALEXANDRIA ZONING ORDINANCE OR AS APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
- 12. ALL NEW CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND TO THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC)
- 13. FLOOR AREA CALCULATIONS WITH ALLOWABLE LIMITS, AS APPROVED BY PLANNING COMMISSION AND CITY COUNCIL, ARE DEMONSTRATED HEREIN.
- 14. PRIOR TO COMMENCING NEW WORK, THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING ADJACENT AREAS. If City's existing public infrastructure, including but not limited, to streets, alleyways, driveway aprons, sanitary and storm sewers, street lighting, traffic and pedestrian signals, sidewalks, curb and gutter, and storm water drop inlet structures are damaged BY THE CONTRACTOR OR BY ACTIVITIES RELATING TO THE SITE CONSTRUCTION THEN THE APPLICANT SHALL REPAIR THE SAME TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). A pre-construction walk/survey of

the site shall occur with Construction and Inspection Staff to document existing conditions prior to any land disturbing

- 15. ALL IMPROVEMENTS TO THE CITY'S RIGHT-OF-WAY SUCH AS CURB, GUTTER, SIDEWALK, AND DRIVEWAY APRONS, ETC., ARE DESIGNED PER THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
- 16. ALL STREET CUT AND PATCH WORK LOCATED IN PUBLIC RIGHT-OF-WAYS, REQUIRED FOR ANY UTILITY INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES).
- 17. CONTRACTOR MUST ENSURE THAT THERE IS NO DISTURBANCE ON ADJACENT PROPERTIES WITHOUT RECORDED EASEMENT OR NOTARIZED LETTER OF PERMISSION FROM THE ADJACENT PROPERTY
- 18. All required state and federal permits, which could include permits from the Virginia Department of Conservation and Recreation (VDCR), Virginia Department of Environmental Quality (VDEQ), virginia department of historic resources (VDHR), united states Environmental Protection Agency (usepa), Army Corps of Engineers and Virginia Marine Resources, must be in place for all project construction and mitigation work prior to release of the final site plan. This includes the state requirement for a Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities for land disturbing activities greater than 2,500. Information regarding the VSMP General Permit can IS found online at:
- http://www.dcr.virginia.gov/soil and water/vsmp.shtml 19. PERMITS FROM THE CITY OF ALEXANDRIA OFFICE OF ENVIRONMENTAL QUALITY (OEQ), TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). AND BUILDING AND FIRE CODE ADMINISTRATION SHALL BE OBTAINED BY THE APPLICANT, AS REQUIRED AND DOCUMENTED HEREIN. THE CONTRACTOR CAN CONTACT ALEXANDRIA FIRE AND CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
- 20. ANY WORK IN THE PUBLIC RIGHT OF WAY SHALL REQUIRE A SEPARATE PERMIT FROM THE DIRECTOR. TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE CONTRACTOR CAN CONTACT THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES AT (703) 746-4035 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
- 21. THE PROPERTY ADDRESS MUST BE CLEARLY MARKED IN THE FRONT AND BACK OF THE PROPOSED DEVELOPMENT SITE DURING CONSTRUCTION FOR EMERGENCY RESPONSE PURPOSE IN CONTRASTING COLORS FOR EASY IDENTIFICATION.
- DEPARTMENT AT 703-838-4520 REGARDING SECURITY HARDWARE FOR NEW CONSTRUCTION. THIS SHALL BE COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMIT. 23. ROOF DRAINAGE SYSTEM, SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEM MUST BE

22. THE APPLICANT SHALL CONTACT THE CRIME PREVENTION UNIT OF THE ALEXANDRIA POLICE

- INSTALLED SO AS NEITHER TO ADVERSELY IMPACT UPON, NOR CAUSE EROSION DAMAGE TO ADJACENT PROPERTIES OR THE PUBLIC RIGHT OF WAY.
- 24. THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE OCCURS ON SITE TO PREVENT PONDING OR DRAINAGE PROBLEMS ON ADJACENT PROPERTIES.
- 25. IN THE EVENT, THE PROPOSED ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT OF WAY OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.
- 26. PER THE REQUIREMENTS OF SECTION 8-1-12 OF THE CITY CHARTER AND CODE; WHEN THE BUILDING FOOTING HAS BEEN PLACED AND THE WALLS HAVE BEEN RAISED TO THE FIRST JOIST BEARING OR STORY HEIGHT ABOVE GRADE, A PLOT PLAN SHOWING THE EXACT LOCATION OF THE WALLS SHALL BE PREPARED BY A LICENSED, CERTIFIED PUBLIC LAND SURVEYOR OR PROFESSIONAL ENGINEER AND FILED WITH THE BUILDING OFFICIAL FOR APPROVAL BEFORE PROCEEDING FURTHER WITH THE

- 27. A SEPARATE DESIGN IS REQUIRED FOR ALL WALLS 24" AND OVER IN HEIGHT FROM THE GRADE AND SUBJECT to separate permits to be obtained by the owners. geotechnical and structural design is to be COMPLETED by others. this FINAL SITE plan SHOWS location, proposed grading, AND DESIGN OF ALL THE
- 28. SUBMIT A SURVEY, CONSISTENT WITH THE REQUIREMENTS FOR CERTIFICATE OF OCCUPANCY CHECKLIST, TO THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO
- REQUESTING AN INSPECTION FOR A CERTIFICATE OF OCCUPANCY. 29. ALL SANITARY LATERALS AND/OR SEWERS NOT SHOWN IN THE EASEMENTS SHALL BE OWNED AND MAINTAINED PRIVATELY.
- 30. ALL STORM DRAINS NOT SHOWN WITHIN AN EASEMENT OR IN A PUBLIC RIGHT OF WAY SHALL BE OWNED AND MAINTAINED PRIVATELY. 31. ALL WATER FACILITY CONSTRUCTION SHALL CONFORM TO VIRGINIA AMERICAN WATER COMPANY
- STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONTACT VIRGINIA AMERICAN WATER COMPANY AT (703) 549-7080 TO COORDINATE CONSTRUCTION AND INSPECTION OF WATER FACILITIES. 32. The sidewalks shall remain opened during construction or pedestrian access shall be maintained to the satisfaction of

the Director of Transportation and Environmental Services throughout the construction of the project.

- 33. Prior to the release of the final site plan, a Traffic Control Plan for construction detailing proposed controls to traffic movement, lane closures, construction entrances, haul routes, and storage and staging shall be provided for information purpose; however, an amended Traffic Control Plan, if required by the Director of Transportation and Environmental Services shall be submitted to the Director of TRANSPORTATION AND ENVIRONMENTAL SERVICES along with the Building Permit Application. The Final Site Plan shall include a statement "FOR INFORMATION ONLY" on the Traffic Control Plan Sheets.
- 34. A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF, IN ACCORDANCE WITH VIRGINIA USBC 115.0.

#### EMERGENCY VEHICLE EASEMENTS NOTE

AND SEDIMENT CONTROL PERMIT.

ALL EMERGENCY VEHICLE EASEMENTS WILL BE PROVIDED BY WAY OF POTOMAC GREENS DRIVE PER COORDINATION AND DISCUSSIONS WITH THE CITY OF ALEXANDRIA FIRE AND EMERGENCY RESPONSE

### GENERAL EROSION AND SEDIMENT CONTROL NOTES

- AN EROSION AND SEDIMENT CONTROL PLAN MUST BE APPROVED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO ANY LAND DISTURBING ACTIVITY
- GREATER THAN 2,500 SQUARE FEET. 2. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES shall BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), VIRGINIA
- REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS. AN EROSION AND SEDIMENT CONTROL PLAN IS INCLUDED WITH THESE FINAL PLANS FOR APPROVAL BY THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR REFERENCE BY THE EROSION
- 4. A "CERTIFIED LAND DISTURBER" (CLD) SHALL BE NAMED IN A LETTER TO THE DIVISION CHIEF OF CONSTRUCTION AND INSPECTION (C&I), DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO ANY LAND DISTURBING ACTIVITIES. IF THE CLD CHANGES DURING THE PROJECT, THAT CHANGE MUST BE NOTED IN A LETTER TO THE DIVISION CHIEF. A NOTE TO THIS EFFECT SHALL BE PLACED ON THE PHASE I EROSION AND SEDIMENT CONTROL SHEETS ON THE SITE PLAN.
- 5. THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, CONSTRUCTION AND INSPECTION (C&I) DIVISION MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENTS OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. THE RESPONSIBLE CERTIFIED LAND DISTURBER (cld) shall ATTEND the PRE-CONSTRUCTION MEETING.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES INTENDED TO CONTROL EROSION AND TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- CONSTRUCTION SHALL BE SEQUENCED SUCH THAT GRADING OPERATION CAN BEGIN AND END AS QUICKLY AS POSSIBLE. AREAS NOT TO BE DISTURBED MUST BE CLEARLY MARKED OR FLAGGED.
- 8. AN INSPECTION BY THE CITY OF ALEXANDRIA IS REQUIRED AFTER INITIAL INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND BEFORE ANY CLEARING OR GRADING CAN BEGIN.
- 9. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES. 10. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN THOSE INDICATED ON THESE PLANS INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS, THE

CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR

- REVIEW AND APPROVAL BY THE CITY OF ALEXANDRIA. 11. THE DEVELOPER AND CONTRACTORS ARE TO KEEP DENUDED AREAS TO A MINIMUM. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR. ANY STOCKPILED MATERAIL which WILL REMAIN IN PLACE LONGER THAN 10 DAYS must be SEEDED FOR TEMPORARY VEGETATION AND
- 12. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED AS SOON AS POSSIBLE BUT NO LATER THAN 48 HOURS AFTER

MULCHED WITH STRAW MULCH OR OTHERWISE STABILIZED.

- 13. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- 14. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED THROUGH AN APPROVED FILTERING DEVICE OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY IMPACT FLOWING STREAMS OR OFF-SITE PROPERTY.
- 15. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE
- EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY. 16. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION AND AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL (T&ES) SERVICES OF THE CITY OF ALEXANDRIA.
- 17. ANY DENUDED SLOPES, EITHER DISTURBED OR CREATED BY THIS PLAN THAT EXCEED 2500 SQUARE FEET SHALL BE SODDED AND PEGGED FOR STABILITY AND EROSION CONTROL. AT THE COMPLETION OF THE PROJECT AND PRIOR TO THE RELEASE OF THE BOND, ALL DISTURBED AREAS SHALL BE STABILIZED PERMANENTLY AND ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED.
- ALL VEHICLES SHALL BE CLEANED BEFORE ENTERING ONTO THE PUBLIC RIGHT-OF-WAY. 19. THE WASH WATER FROM THE CONSTRUCTION ENTRANCE SHALL BE FILTERED THROUGH THE PROVIDED SILT FENCE TO ENSURE THAT NO SEDIMENT LADEN RUNOFF IS ALLOWED TO RUNOFF ON TO THE ADJACENT PROPERTY OR THE PUBLIC RIGHT OF WAY.
- INSTALL SILT FENCE AND TREE PROTECTION, WHERE APPLICABLE. 21. DUST CONTROL SHALL BE ACCOMPLISHED BY TEMPORARY VEGETATIVE COVER AND BY IRRIGATION AS NEEDED.

#### SEQUENCE OF CONSTRUCTION FOR INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES

INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS; AND STABILIZE CONSTRUCTION ENTRANCE AS SHOWN ON THIS PLAN.

- 2. ALL VEGETATION PRESERVATION AND PROTECTION METHODS SHALL BE APPROVED / VERIFIED IN FIELD BY THE CITY ARBORIST PRIOR TO COMMENCEMENT OF ANY GROUND DISTURBING ACTIVITY. INSTALL INLET PROTECTION AT EXISTING STORM DRAIN INLETS AS NECESSARY AND AS SHOWN ON
- 4. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES AS NECESSARY AND AS DIRECTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
- CONDUCT DEMOLITION AND CONSTRUCTION ACTIVITIES ACCORDING TO THE APPLICABLE PLANS. AS CONTRIBUTARY DRAINAGE AREAS ARE STABILIZED AND WITH THE PERMISSION OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE INDIVIDUAL EROSION AND SEDIMENT CONTROL
- 7. UPON COMPLETION OF DEMOLITION, CONSTRUCTION AND LAND DISTURBING ACTIVITIES: PROVIDE PERMANENT STABILIZATION ACCORDING TO APPROVED METHODS AND REMOVE ALL REMAINING EROSION AND SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF THE EROSION AND SEDIMENT

#### SEDIMENT TRAPS AND BASINS

PRACTICES.

E F G H I J K L M

SINCE THE TOTAL DRAINAGE AREA TO BE SERVED IS GREATER THAN THREE ACRES, THEREFORE, A SEDIMENT BASIN IS DESIGNED USING THE CRITERIA THAT THE MINIMUM STORAGE CAPACITY OF THE TRAP IS 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM IS DESIGNED TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR 24-HOUR DURATION STORM. THE RUNOFF COEFFICIENTS USED IN THE RUNOFF CALCULATIONS CORRESPOND TO THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

#### COMPUTATION OF PEAK RUNOFF RATE

THE PRE AND POST DEVELOPMENT PEAK RATES OF RUNOFF ARE COMPUTED BY THE RATIONAL METHOD USING THE CITY OF ALEXANDRIA INTENSITY-DURATION-FREQUENCY (IDF) CURVES, DESIGN AND CONSTRUCTION STANDARDS, DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, JULY 1989. AN INLET TIME OF CONCENTRATION OF 5 MINUTES HAS BEEN USED FOR BUSINESS, COMMERCIAL, APARTMENT AND TOWNHOUSE COMPLEXES AS IN AN ULTRA URBAN ENVIRONMENT. ALL HYDROLOGIC ANALYSES RELATED TO PRE AND POST DEVELOPMENT IS BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT, RESPECTIVELY.

#### STORMWATER MANAGEMENT PLAN

THE PLAN DEMONSTRATES THAT THE SITE HAS BEEN DEVELOPED TO INCREASE THE POST DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR A TWO-YEAR AND TEN YEAR STORM CONSIDERED INDIVIDUALLY. THEREFORE, STORMWATER DETENTION IS PROVIDED PER THE REQUIREMENTS OF ARTICLE 13-109(F)(1) OF ALEXANDRIA ZONING ORDINANCE NOT TO RELEASE STORMWATER FROM THE SITE AT A HIGHER RATE THAN PRE DEVELOPMENT CONDITION. AN ADEQUATE OUTFALL ANALYSIS IS PROVIDED TO DEMONSTRATE THAT THE STORMWATER IS DISCHARGED INTO AN ADEQUATE OUTFALL PER THE REQUIREMENTS OF ARTICLE XI, SECTION 11-410 (N).

#### ADEQUATE OUTFALL ANALYSIS

THE PLAN DEMONSTRATES THE AVAILABILITY OF A STORM SEWER ADEQUATE OUTFALL IN COMPLIANCE WITH THE REQUIREMENTS OF VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (DCR), EROSION AND SEDIMENT CONTROL (ESC) REGULATIONS (4VAC50-30-40.19) MINIMUM STANDARD 19 (MS-19), ARTICLE XI SECTION 11-410 (N) OF THE ALEXANDRIA ZONING ORDINANCE (AZO), AND THE APPROVED CONDITION OF DEVELOPMENT.

THE PLAN DEMONSTRATES THAT AN EXISTING NATURAL CHANNEL IS NOT OVERTOPPED FOR A TEN-YEAR STORM AND DOES NOT PRODUCE EROSIVE VELOCITIES FOR A TWO YEAR STORM; THEREFORE, AN ADEQUATE STORM WATER OUTFALL IS ASSUMED TO BE AVAILABLE.

ADDITIONAL STUDIES WILL BE PERFORMED FOR WETLANDS MITIGATION AND RESTORATION WHICH SHALL VERIFY ADEQUATE OUTFALL AND COMPLY WITH ALL CONDITIONS APPLIED DURING SITE PLAN APPROVAL.

# STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT

THE APPLICANT SHALL SUBMIT TO THE CITY OF ALEXANDRIA A STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT WITH FINAL #2 SUBMISSION THE MAINTENANCE AGREEMENT SHALL BE REGISTERED WITH ALEXANDRIA LAND RECORDS.

# ENVIRONMENTAL SITE ASSESSMENT

- 1. THE PROJECT WILL DISTURB EXISTING WETLANDS BOTH PERMANENTLY AND TEMPORARILY DURING CONSTRUCTION. THE REMAINING WETLANDS WILL BE RESTORED TO ALL EXTENTS POSSIBLE UPON COMPLETION OF TH EPROJECT. ADDITIONALLY, WETLANDS REMEDIATION EFFORTS WILL BE APPLIED OFF-SITE.
- 2. THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES. OFFICE OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS, AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
- 3. ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-838-4400 EXT 267/255.
- 4. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
  - MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
  - SATURDAYS FROM 9 AM TO 6 PM. NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.

# PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:

- MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND
- SATURDAYS FROM 10 AM TO 4 PM.

# STORMWATER BEST MANAGEMENT PRACTICES (BMP) NOTES

THE STORMWATER BEST MANAGEMENT PRACTICES (BMP) REQUIRED FOR THIS PROJECT SHALL BE CONSTRUCTED AND INSTALLED UNDER THE DIRECT SUPERVISION OF THE DESIGN ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THE DESIGN ENGINEER SHALL MAKE A WRITTEN CERTIFICATION TO THE CITY THAT THE BMPs ARE CONSTRUCTED AND INSTALLED AS DESIGNED AND IN ACCORDANCE WITH THE APPROVED SITE PLAN. IN ADDITION, AGGREGATE LAYERS AND COLLECTOR PIPES MAY NOT BE INSTALLED UNLESS THE DESIGN ENGINEER OR HIS REPRESENTATIVE IS PRESENT.

THE CONTRACTOR SHALL FURNISH THE CITY WITH AN OPERATION AND MAINTENANCE MANUAL FOR ALL BMPs ON THE PROJECT. THE MANUAL SHALL INCLUDE AN EXPLANATION OF THE FUNCTIONS AND OPERATIONS OF EACH BMP AND ANY SUPPORTING UTILITIES. CATALOG CUTS ON ANY MECHANICAL OR ELECTRICAL EQUIPMENT AND A SCHEDULE OF ROUTINE MAINTENANCE FOR THE BMPs AND SUPPORTING EQUIPMENT.

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ADDITIONAL STUDIES WILL BE PERFORMED FOR WETLANDS MITIGATION AND RESTORATION WHICH SHALL VERIFY ADEQUATE OUTFALL AND COMPLY WITH ALL CONDITIONS APPLIED DURING SITE PLAN APPROVAL.

#### STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT

THE APPLICANT SHALL SUBMIT TO THE CITY OF ALEXANDRIA A STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT WITH FINAL #2 SUBMISSION THE MAINTENANCE AGREEMENT SHALL BE REGISTERED WITH ALEXANDRIA LAND RECORDS.

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- 2. THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, OFFICE OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS, AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL. ITS CONTENTS. ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
- 3. ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-838-4400 EXT 267/255.
- 4. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11. CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
  - MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
  - SATURDAYS FROM 9 AM TO 6 PM.
- PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:

NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.

MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND

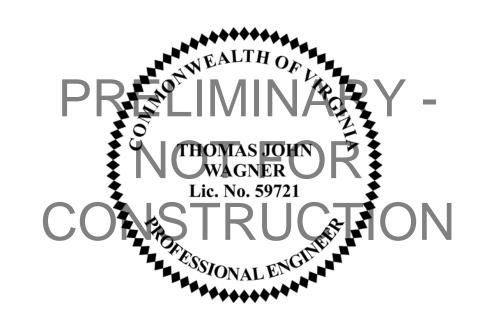
# STORMWATER BEST MANAGEMENT PRACTICES (BMP) NOTES

SATURDAYS FROM 10 AM TO 4 PM.

THE STORMWATER BEST MANAGEMENT PRACTICES (BMP) REQUIRED FOR THIS PROJECT SHALL BE CONSTRUCTED AND INSTALLED UNDER THE DIRECT SUPERVISION OF THE DESIGN ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THE DESIGN ENGINEER SHALL MAKE A WRITTEN CERTIFICATION TO THE CITY THAT THE BMPs ARE CONSTRUCTED AND INSTALLED AS DESIGNED AND IN ACCORDANCE WITH THE APPROVED SITE PLAN. IN ADDITION, AGGREGATE LAYERS AND COLLECTOR PIPES MAY NOT BE INSTALLED UNLESS THE DESIGN ENGINEER OR HIS REPRESENTATIVE IS PRESENT.

THE CONTRACTOR SHALL FURNISH THE CITY WITH AN OPERATION AND MAINTENANCE MANUAL FOR ALL BMPs ON THE PROJECT. THE MANUAL SHALL INCLUDE AN EXPLANATION OF THE FUNCTIONS AND OPERATIONS OF EACH BMP AND ANY SUPPORTING UTILITIES, CATALOG CUTS ON ANY MECHANICAL OR ELECTRICAL EQUIPMENT AND A SCHEDULE OF ROUTINE MAINTENANCE FOR THE BMPs AND SUPPORTING EQUIPMENT.

APPROVED SPECIAL USE PERMIT NO. DEPARTMENT OF PLANNING & ZONING DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO.\_ DIRECTOR DATE CHAIRMAN, PLANNING COMMISSION DATE RECORDED \_\_\_ INSTRUMENT NO. DEED BOOK NO. PAGE NO.



Job Title WASHINGTON POTOMAC YARD METROPOLITAN AREA METRORAIL STATION TRANSIT AUTHORITY Drawing Title STANDARD NOTES SHEET 2 OF 37 11/19/2018 JD TW Issue Date By Chkd

77 Water Street New York, NY 10005 T +1 212 896 3000 www.arup.com N.T.S. File Name **Drawing Status** PRELIMINARY DSUP 254922

G-01A

UTILITY WORKS

- a. ALL PRIVATE UTILITIES SHALL BE LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY AND PUBLIC UTILITY EASEMENTS UNLESS THE UTILITY OWNERS HAVE FRANCHISE AGREEMENT WITH THE CITY OF ALEXANDRIA; HOWEVER, NO ELECTRIC TRANSFORMERS AND SWITCH GEARS / CONTROL BOXES SHALL BE PLACED IN THE PUBLIC RIGHT OF WAY.
- b. ALL THE EXISTING AND PROPOSED PUBLIC AND PRIVATE UTILITIES AND EASEMENTS SHALL BE SHOWN AND A DESCRIPTIVE NARRATION OF VARIOUS UTILITIES SHALL BE PROVIDED ON THE PLAN.
- c. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN UTILITY SERVICES AT ALL TIMES DURING CONNECTION AND/OR CONSTRUCTION.
- d. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- e. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- f. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- g. SHOULD UTILITY CONSTRUCTION BE PERFORMED AFTER COMPLETING EARTHWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1551) COMPACTION IN ALL TRENCH BACKFILL.
- h. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
- i. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- j. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION, AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, CITY OF ALEXANDRIA.
- k. A REMEDIATION PLAN SHALL BE SUBMITTED DETAILING HOW CONTAMINATED SOILS AND/OR GROUNDWATER WILL BE DEALT WITH, INCLUDING PLANS TO REMEDIATE UTILITY CORRIDORS.
- UTILITY CORRIDORS IN CONTAMINATED SOIL SHALL BE OVER EXCAVATED BY 2 FEET AND
- m. GRADING CAN BE PERFORMED ON INSTALLATION OF UTILITIES.

BACKFILLED WITH "CLEAN" SOIL.

n. ALL UTILITIES SUCH AS ELECTRICAL LINES, GAS PIPES, COMMUNICATION CABLES, INCLUDING WATER AND SEWER LATERALS ON PRIVATE PROPERTY IN THE CITY OF ALEXANDRIA SHALL BE PROVIDED WITH MINIMUM 3" WIDE 5 MIL OVERALL THICKNESS DETECTABLE UNDERGROUND WARNING TAPE (DUWT). THE DUWT SHALL BE INSTALLED AT DEPTHS OF 12" TO 18" FOR DUWT WIDTHS OF 3" AND 24" FOR WIDTHS OF 6" SO AS TO MAKE UNDERGROUND INSTALLATIONS EASY TO FIND USING A NON-FERROUS LOCATOR. THE DUWT SHALL BE WITH ALUMINUM BACKING OR SOLID ALUMINUM CORE LAMINATED WITH A PROTECTIVE CLEAR FILM ON BOTH SIDES, SEALING AND PROTECTING THE GRAPHICS FROM UNDERGROUND MOISTURE, ACIDS, ALKALIS, AND OTHER SOIL SUBSTANCES. ALL DUWT TAPES SHALL BE PRINTED IN BLACK INK ON AMERICAN PUBLIC WORKS ASSOCIATION (APWA) APPROVED COLORS TO MEET OR EXCEED INDUSTRY STANDARDS.

COLOR	CODES
RED	CAUTION BURIED ELECTRIC POWER LINES, CABLES, CONDUITS, AND LIGHTING CABLES
YELLOW	CAUTION GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	CAUTION COMMUNICATIONS, ALARM OR SIGNAL LINES, CABLES, OR CONDUITS
BLUE	CAUTION POTABLE WATER
PURPLE	CAUTION RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	CAUTION SEWER, DRAIN LINES, AND FORCE MAIN

# SOLID WASTE MANAGEMENT

SINCE THE APPLICANT IS NOT REQUIRED BY SECTION 5-1-31 OF THE CITY CHARTER AND CODE TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES TO USE THE CITY OF ALEXANDRIA'S COLLECTION AND DISPOSAL SERVICES; SOLID WASTE COLLECTION AND DISPOSAL SERVICES SHALL BE PROVIDED BY THE APPLICANT / PRIVATE COLLECTORS AND SHALL BE PASSED ON TO THE NEW OWNER IN CASE OF A SALE OF THE PROPERTY SUBSEQUENT TO THE DEVELOPMENT.

THE PLAN DEMONSTRATES THAT ADEQUATE SPACE WITHIN EACH UNIT TO ACCOMMODATE A CITY STANDARD SUPER CAN AND RECYCLING CONTAINER HAS BEEN PROVIDED. THE CONTAINERS ARE PLACED INSIDE THE UNITS OR WITHIN AN ENCLOSURE THAT COMPLETELY SCREENS THEM FROM VIEW. THE DEVELOPER SHALL PURCHASE THE STANDARD CONTAINERS FROM THE CITY OR PROVIDE CONTAINERS THAT ARE COMPATIBLE WITH CITY COLLECTION SYSTEM AND APPROVED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

THE PLAN DEMONSTRATES THAT ADEQUATE SPACE FOR SOLID WASTE AND RECYCLING CONTAINERS HAS BEEN PROVIDED AND THE DEVELOPMENT MEETS ALL THE MINIMUM STREET STANDARDS, INCLUDING ALL STANDARD CUL-DE-SAC TURNAROUNDS, IF APPLICABLE. THE TRASH TRUCK TURNING MOVEMENTS DEMONSTRATE THAT THE TRASH TRUCK IS ABLE TO PICK UP SOLID WASTE FROM PRIVATE STREETS WITHOUT BACKING UP. THE CONTAINERS HAVE BEEN PLACED WITHIN AN ENCLOSURE THAT COMPLETELY SCREENS THEM FROM VIEW.

2. IN THE EVENT SECTION 5-1-2(12B) OF THE CITY CHARTER AND CODE TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES IS AMENDED TO DESIGNATE MULTI-FAMILY DWELLINGS IN GENERAL, OR MULTI-FAMILY DWELLINGS WHEN SO PROVIDED BY SPECIAL USE PERMIT (SUP), AS REQUIRED USER PROPERTY [AS DEFINED IN 5-1-2(12B) OF THE CITY CHARTER AND CODE], THEN REFUSE COLLECTION SHALL BE PROVIDED BY THE CITY FOR THE TOWNHOME CONDOMINIUM PORTION OF THIS PLAN.

D E F G H I J K

#### SIGN CONSTRUCTION

A SEPARATE PERMIT IS REQUIRED FOR SIGN CONSTRUCTION.

#### ANDSCAPE NOTES

- 1. SEE DSUP 2016-0005 FOR PROPOSED LANDSCAPE IN AND AROUND POTOMAC GREENS PARK.
- SEE DSUP 2016-0006 FOR PROPOSED LANDSCAPE IN AND AROUND POTOMAC YARD PARK.
   ALL PROTECTION AND PRESERVATION MEASURES FOR EXISTING VEGETATION, INCLUDING MAINTENANCE AND PENALTIES SHALL BE PREPARED IN COMPLIANCE WITH <u>LANDSCAPE GUIDELINES OF</u>
- THE CITY OF ALEXANDRIA AND APPROVED BY THE CITY ARBORIST IN-FIELD PRIOR TO COMMENCEMENT OF ANY SITE DISTURBING AND CONSTRUCTION ACTIVITIES.
- ALL VEGETATION PRESERVATION AND PROTECTION METHODS SHALL BE APPROVED / VERIFIED IN FIELD BY THE CITY ARBORIST PRIOR TO COMMENCEMENT OF ANY GROUND DISTURBING ACTIVITY.
- 5. LOCATION AND METHOD FOR PROTECTION AND PRESERVATION OF EXISTING TREES WILL BE SHOWN ON DEMOLITION, SEDIMENT AND EROSION CONTROL, AND LANDSCAPE PLAN SHEETS.
- 6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE THAT ANY EXISTING LANDSCAPING WHICH IS TO BE RELOCATED ON THE SITE WILL BE CAREFULLY STORED IN A DESIGNATED AREA BEFORE BEING REPLANTED. COORDINATION WITH THE OWNER FOR MUTUALLY AGREEABLE STORAGE LOCATIONS FOR LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PLANT MATERIAL THAT DOES NOT SURVIVE STORAGE AND REPLANTING.
- 7. APPLICANT MUST INCLUDE ON THE PLAN DOCUMENTATION OF COMMUNICATION WITH THE ADJACENT PROPERTY OWNER(S) VERIFYING NOTIFICATION OF AND AGREEMENT WITH CONSTRUCTION IMPACT, POTENTIAL FOR LOSS, AND AGREED UPON REMEDIAL MEASURES PERTAINING TO THE EXISTING TREE(S) ON ADJACENT PROPERTIES THAT WILL BE AFFECTED BY PROJECT WORK.
- INCLUDE SPECIFIC CONSTRUCTION STAGING INFORMATION ON THE PLAN THAT INDICATES THE METHODS, AND PROCEDURES TO BE IMPLEMENTED FOR PROTECTION OF EXISTING ON-SITE AND OFF-SITE VEGETATION.
- 9. PROPOSED PLANTING SHALL BE PROVIDED IN COMPLIANCE WITH LANDSCAPE GUIDELINES OF THE CITY
- 10. SPECIFICATION FOR ALL PLANTINGS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF ANSI-Z60.1, THE AMERICAN STANDARD FOR NURSERY STOCK AS PRODUCED BY THE AMERICAN ASSOCIATION OF NURSERYMEN; WASHINGTON, D.C.
- 11. THE APPLICANT SHALL MAKE SUITABLE ARRANGEMENTS FOR PRE-SELECTION TAGGING, PRE-CONTRACT GROWING, OR IS UNDERTAKING SPECIALIZED PLANTING STOCK DEVELOPMENT WITH A NURSERY OR GROWER THAT IS CONVENIENTLY LOCATED TO THE PROJECT SITE, OR UTILIZING OTHER PROCEDURES THAT WILL ENSURE AVAILABILITY OF SPECIFIED MATERIALS. IN THE EVENT THAT SHORTAGES AND/OR INABILITY TO OBTAIN SPECIFIED PLANTINGS OCCURS, REMEDIAL EFFORTS INCLUDING SPECIES CHANGES, ADDITIONAL PLANTINGS AND MODIFICATION TO THE LANDSCAPE PLAN SHALL BE UNDERTAKEN BY THE APPLICANT. ALL REMEDIAL EFFORTS SHALL, WITH PRIOR APPROVAL BY THE CITY, BE PERFORMED TO THE SATISFACTION OF THE DIRECTORS OF PLANNING & ZONING, RECREATION, PARKS & CULTURAL ACTIVITIES AND TRANSPORTATION & ENVIRONMENTAL SERVICES.
- 12. IN LIEU OF MORE STRENUOUS SPECIFICATIONS, ALL LANDSCAPE RELATED WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION (AT TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA; GAITHERSBURG, MARYLAND
- 13. PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATIONS, A PRE-INSTALLATION/CONSTRUCTION MEETING WILL BE SCHEDULED WITH THE CITY'S ARBORIST AND LANDSCAPE ARCHITECTS TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES.
- 14. MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED IN PERPETUITY BY THE APPLICANT/OWNER/SUCCESSOR, IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND/OR AS CONDITIONED BY PROJECT APPROVAL.
- 15. A CERTIFICATION LETTER FOR TREE WELLS, TREE TRENCHES AND PLANTINGS ABOVE STRUCTURE SHALL BE PROVIDED BY THE PROJECT'S LANDSCAPE ARCHITECT. THE LETTER SHALL CERTIFY THAT ALL BELOW GRADE CONSTRUCTION IS IN COMPLIANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS. THE LETTER SHALL BE SUBMITTED TO THE CITY ARBORIST AND APPROVED PRIOR TO APPROVAL OF THE LAST AND FINAL CERTIFICATE OF OCCUPANCY FOR THE PROJECT. THE LETTER SHALL BE SUBMITTED BY THE OWNER/APPLICANT/SUCCESSOR AND SEALED AND DATED AS APPROVED BY THE PROJECT'S LANDSCAPE ARCHITECT.
- 16. AS-BUILT DRAWINGS FOR LANDSCAPE PLAN AND/OR IRRIGATION/WATER MANAGEMENT SYSTEMS DEPICTED IN DSUP 2016-0005 AND 2016-0006 WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES. AS-BUILT DRAWINGS SHALL INCLUDE CLEAR IDENTIFICATION OF ALL VARIATION(S) AND CHANGES FROM APPROVED DRAWINGS INCLUDING LOCATION, QUANTITY AND SPECIFICATION OF ALL PROJECT ELEMENTS.

# DEMOLITION NOTES

- A SEPARATE PERMIT IS REQUIRED FOR DEMOLITION; HOWEVER, nO DEMOLITION SHALL BEGIN UNTIL
  ALL EROSION AND SEDIMENT and tree PROTECTION CONTROLS ARE IN PLACE AND ARE APPROVED BY
  AN EROSION AND SEDIMENT CONTROL INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND
  ENVIRONMENTAL SERVICES.
- 2. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE MOST CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED, TO ENVIRONMENTAL PROTECTION AGENCY (EPA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (oSHA), VIRGINIA OCCUPATIONAL AND SAFETY HELATH COMPLIANCE PROGRAM (VOSH ENFORCEMENT), VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT, NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), AND NATIONAL INSTITUTUE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK WITH REPRESENTATIVE UTILITY COMPANIES AND FOR THE IMPLEMENTATION OF REQUIRED UTILITY-RELATED WORK.
- 4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY HAZARDOUS MATERIALS DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DOCUMENT SAME TO THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
- 5. DISCONNECTION OF SERVICES AND SYSTEMS SUPPLYING UTILITIES TO BE ABANDONED OR DEMOLISHED SHALL BE COMPLETED PRIOR TO OTHER SITE DEMOLITION IN FULL COMPLIANCE WITH APPLICABLE CODES, REGULATIONS, AND THE REQUIREMENTS OF UTILITY PURVEYORS HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY PURVEYORS, PAYMENT OF ASSOCIATED FEES AND PROCUREMENT OF ALL NECESSARY PERMITS.

- 6. PRIOR TO REMOVAL OF MATERIALS OVER EXISTING UTILITY SYSTEMS, THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS AND, IF AT VARIANCE WITH CONDITIONS AS REPRESENTED ON THE PLANS, NOTIFY THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTIONS AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
- THE CONTRACTOR SHALL BACKFILL EXCAVATED AREAS WITH APPROVED MATERIALS / CLEAN FILL AS PER THE REQUIREMENTS OF VIRGINIA DEPARTMENT OF TRANSPORTATION (vdot).
- 8. THE CONTRACTOR SHALL PROTECT AND PREVENT DAMAGE TO EXISTING ON-SITE UTILITY DISTRIBUTION FACILITIESTHAT ARE TO REMAIN. ACTIVE UTILITY DISTRIBUTION FACILITIES ENCOUNTERED DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES SHALL BE SHUT OFF AT THE SERVICE MAIN WITH THE APROVAL OF THE OWNER'S REPRESENTATIVE.
- 9. DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY EXISTING UTILITIES AND/OR UTILITY SYSTEM STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL DOCUMENT THE SAME AND FORWARD THE INFORMATION TO THE RESIDENT ENGINEER / OWNER'S
- REPRESENTATIVE, AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.

  10. THE CONTRACTOR OR APPLICANT SHALL WORK WITH THE CITY STAFF TO REUSE THE EXISTING, LEFTOVER, UNUSED, AND/OR DISCARDED BUILDING MATERIALS AS PART OF THE DEMOLITION PROCESS OR THE CONSTRUCTION DEBRIS MUST BE REMOVED TO AN APPROVED LANDFILL WITH ADEQUATE FREQUENCY IN ACCORDANCE WITH THE VIRGINIA STATE LITTER CONTROL ACT.

#### **CONSTRUCTION NOTES**

- 1. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY ACTION AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUATION OF SERVICE.
- 2. THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED FOLLOWING NOTIFICATION AND MARKING OF ALL EXISTING UTILITIES TO VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES TEST HOLES TO BE PERFORMED AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE OWNER AND ENGINEER. REDEISGN AND APPROVAL BY REVIEWING AGENCIES SHALL BE OBTAINED, IF REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.
- THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING
  CONSTRUCTION
- THE CONTRACTOR SHALL CLEAR THE SITE OF ALL TREES, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SPECIFIED, AND SHALL BE RESPONSIBLE FOR ENSURING THAT EXISTING UTILITIES ARE DISCONNECTED.
- THE DEVELOPER SHALL PROVIDE OVER-LOT GRADING TO PROVIDE POSITIVE DRAINAGE AND PRECLUDE PONDING OF WATER.
- 7. ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. THE MINIMUM ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS, SEED MIXTURE TO BE AS RECOMMENDED BY THE CITY AGENT. ALL SLOPES 3:1 AND GREATER SHALL BE SODDED AND PEGGED OF OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY OF ALEXANDRIA
- EXISTING SEPTIC FIELDS, IF APPLICABLE, SHALL BE ABANDONED IN ACCORDANCE WITH VIRGINIA HEALTH DEPARTMENT STANDARDS AND SPECIFICATIONS.
- ALL ABOVE GROUND UTILITIES SERVING THE SITE SHALL BE RELOCATED AS REQUIRED BY THE OWNING UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.
- AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.

  10. PRIOR TO BEGINNING OF CONSTRUCTION, CONTRACTOR SHALL VERIFY FROM THE ARCHITECTURAL DRAWINGS ALL DIMENSIONS, DETAILS, AND TREATMENTS FOR THE PROPOSED BUILDINGS, WALKWAYS,
- 11. THE CONTRACTOR IS TO VERIFY INVERT, SIZE, AND LOCATION OF BUILDING UTILITY CONNECTIONS WITH THE MECHANICAL PLANS PRIOR TO PLACEMENT OF UNDERGROUND UTILITIES.

AND OTHER PROPOSED CONSTRUCTION WHERE INDICATED ON THE PLANS.

- EXISTING BUILDINGS, FENCES AND OTHER EXISTING PHYSICAL FEATURES ARE TO BE REMOVED AS REQUIRED BY THE CONSTRUCTION.
   EXISTING CONSTRUCTION SHALL BE REMOVED TO NEAREST JOINT. NEW CONSTRUCTION SHALL
- BE PROVIDED AS SHOWN AND ANY DAMAGED AREA SHALL BE REPAIRED TO MATCH CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.
- 14. ALL PRIVATE BUILDING CONNECTIONS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
- 15. TOPS OF EXISTING STRUCTURES WHICH REMAIN IN USE ARE TO BE ADJUSTED IN ACCORDANCE WITH THE GRADING PLAN. ALL PROPOSED STRUCTURE TOP ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR WITH THE SITE GRADING PLANS. IN CASE OF CONFLICT, THE GRADING PLAN SHALL SUPERSEDE PROFILE ELEVATIONS. MINOR ADJUSTMENTS TO MEET FINISHED GRADE ELEVATIONS, IF REQUIRED, SHALL BE MADE IN THE FIELD WITH THE APPROVAL OF SITE INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

16. THE DESIGN, CONSTRUCTION, FIELD PRACTICES, AND METHODS SHALL CONFORM TO THE

- REQUIREMENTS SET FORTH BY THE CITY OF ALEXANDRIA ZONING ORDINANCE AND DESIGN AND CONSTRUCTION STANDARDS MANUAL. FAILURE TO COMPLY WITH THE CODE, APPLICABLE MANUALS, AND PROVISIONS OF THE CONSTRUCTION AND ESCROW AGREEMENTS OR THE PERMITS SHALL BE DEEMED A VIOLATION.

  17. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER/DEVELOPER OR HIS AGENT OF
- ANY LEGAL RESPONSIBILITIES WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE CITY OF ALEXANDRIA.
- CONSTRUCTION STAKEOUT SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA.
   THE CONTRACTOR IS REFFRRED TO STRUCTURAL, GEOTECHNICAL, MECHANICAL, AND ARCHITECTURAL
- PLANS FOR FOUNDATION TREATMENT INCLUDING, BUT NOT LIMITED TO, SHEETING AND SHORING FOR BUILDING EXCAVATION, WATERPROFFING FOR FILL AGAINST BUILDINGS, LOCATION OF MECHANICAL EQUIPMENT, AND CONNECTIONS AT THE FACES OF BUILDINGS.
- SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED ENTRANCE AND/OR CURB & GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTER AND/OR PONDING OF WATER ON THE ROADWAY.
   THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A SMOOTH TRANSITION TO EXISTING CURB.
- 21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A SMOOTH TRANSITION TO EXISTING CURB AND SIDEWALKS, IF APPLICABLE.
- 22. THE CALIFORNIA BEARING RATIO (CBR) VALUES OF IN-SITU MATERIALS SHALL BE DETERMINED BY FIELD AND/OR LABORATORY TESTS FOR ACTUAL DETERMINATION OF REQUIRED THICKNESSES OF SURFACE, BASE, SUB-BASE, AND SUB GRADE MATERIALS. THE PAVEMENT SECTION SHALL BE DESIGNED BY A GEOTECHNICAL /LICENSED PROPOFESSIONAL ENGINEER TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING. IN THE CASE OF PAVEMENT PATCHES, PAVEMENT SECTION MUST MEET OR EXCEED EXISTING SECTION.

23. THE THICKNESSES OF SUB-BASE, BASE, AND WEARING COURSE SHALL BE DESIGNED USING "CALIFORNIA METHOD" AS SET FORTH ON PAGE 3-76 OF THE SECOND EDITION OF A BOOK ENTITLED, "DATA BOOK FOR CIVIL ENGINEERS, VOLUME ONE, DESIGN" WRITTEN BY ELWYN E. SEELYE. AN ALTERNATE PAVEMENT SECTION DESIGNED TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING BASED ON CBR AND VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) METHOD (VASWANI METHOD) AND STANDARD MATERIAL SPECIFICATIONS SHALL BE ACCEPTABLE

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- 24. EMERGENCY VEHICLE EASEMENTS (EVE) AND AMERICAN WITH DISTABILITY (ADA) ACCESSIBLE PARKING SPACES MUST BE DELINEATED WITH PAVEMENT MARKINGS PER THE CITY OF ALEXANDRIA STANDARD SIGNAGE AND AMERICAN WITH DISABILITIES (ADA) REQUIREMENTS.
- ALL STRIPING SHALL MEET THE REQUIRMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS (LATEST EDITION) AND SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.
- 26. ALL EARTHWORK OPERATIONS ARE TO BE PERFORMED UNDER THE FULL TIME, ON-SITE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER WITH GEOTECHNICAL TESTING IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS AND GEOTECHNICAL REPORT REQUIREMENTS.
- 27. THE CONTRACTORS SHALL NOT CAUSE OR PERMIT VEHICLES TO IDLE FOR MORE THAN 10 MINUTES WHEN PARKED.
- 28. UNLESS OTHERWISE APPROVED THE CONTRACTOR SHALL PROVIDE THERMOPLASTIC LADDER STYLE / STANDARD PEDESTRIAN CROSS WALKS AT ALL CROSSINGS AT THE PROPOSED DEVELOPMENT, WHICH MUST BE DESIGNED TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE DESIGN OF LADDER STYLE OR STANDARD PEDESTRIAN CROSS WALK SHALL BE EVALUATED ON A CASE BY CASE BASIS AND SHALL COMPLY WITH THE REQUIREMENTS OF POLICY MANUAL SECTION 30.18, PEDESTRIAN CROSSWALKS, JULY 13, 2006. A COPY OF THE POLICY MANUAL CAN BE OBTAINED FROM YON LAMBERT, BICYCLE AND PEDESTRIAN COORDINATOR / TRANSPORTATION PLANNER, TELEPHONE (703) 746-4081.

#### RESOURCE PROTECTION AREA NOTES

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- 1. THE SUBJECT PROPERTY LIES WITHIN A CITY OF ALEXANDRIA RESOURCE PROTECTION AREA (RPA). FIELD DEMARCATED/VERIFIED 50 FEET AND 100 FEET RESOURCE PROTECTION AREA LINES ARE SHOWN ON THE SITE PLAN.
- 2. VEGETATION IN RPA SHALL ONLY BE DISTURBED UPON APPRVAL OF THE CITY OF ALEXANDRIA.
- DEVELOPMENT AND USES PROPOSED IN THE RPA ARE IN COMPLIANCE WITH THE REQUIREMENTS OF ARTICLE 13-107 OF THE ALEXANDRIA ZONING ORDINANCE (AZO).

#### OOD PLAIN NOTES

- 1. THE SITE LIES WITHIN 100-YEAR FLOOD PLAIN WATER SURFACE ELEVATION (WSE) AND THE 100-YEAR FLOOD PLAIN WSE IS SHOWN ON THE SITE PLAN PER THE DEMARCATION OF THE CURRENT FLOOD
- INSURANCE RATE MAP (FIRM) PUBLISHED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

  2. THE PLAN WILL COMPLY WITH THE CONDITIONS OF SITE PLAN APPROVAL.

#### ARCHAEOLOGY NOTES

- 1. ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED PRIOR TO GROUND-DISTURBING ACTIVITIES (SUCH AS CORING, GRADING, FILLING, VEGETATION REMOVAL, UNDERGROUNDING UTILITIES, PILE DRIVING, LANDSCAPING AND OTHER EXCAVATIONS AS DEFINED IN SECTION 2-151 OF THE ZONING ORDINANCE) OR A RESOURCE MANAGEMENT PLAN MUST BE IN PLACE TO PRESERVE AND/OR RECOVER SIGNIFICANT RESOURCES IN CONCERT WITH CONSTRUCTION ACTIVITIES. TO CONFIRM, CALL ALEXANDRIA ARCHAEOLOGY AT (703) 838-4399.
- 2. THE APPLICANT SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-838-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.
- 3. THE APPLICANT SHALL NOT ALLOW ANY METAL DETECTION AND/OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAYS.

# CEMETRY AND/OR BURIAL GROUNDS

THERE IS NO OBSERVABLE, HISTORICAL, OR ARCHAEOLOGICAL EVIDENCE OF CEMETERIES OR BURIAL GROUNDS ON THIS PROPERTY.

# RODENT ABATEMENT NOTE

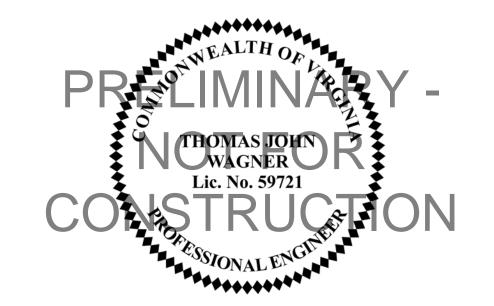
PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT OR LAND DISTURBANCE PERMIT, A RODENT ABATEMENT PLAN SHALL BE SUBMITTED TO THE CITY OF ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION THAT WILL OUTLINE STEPS THAT WILL BE TAKEN TO PREVENT THE SPREAD OF RODENTS FROM THE CONSTRUCTION SITE TO THE SURROUNDING COMMUNITY AND SEWERS. THE CONTRACTOR CAN CONTACT ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.

# MOSQUITO CONTROL NOTES

- SINCE STORM WATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICE (BMP) SYSTEMS THAT HOLD WATER FOR MORE THEN 5 DAYS BETWEEN THE MONTHS OF MAY - OCTOBER HAVE THE POTENTIAL TO CAUSE MOSQUITO BREEDING HABITATS; THEREFORE, SUCH BMPS SHALL BE TREATED WITH A REGISTERED MOSQUITO LARVAL CONTROL PRODUCT. ALL LABELS SHOULD BE FOLLOWED FOR APPLICATION RATES AND AMOUNTS.
- SINCE EXCESSIVE VEGETATION IN EXISTING BMPS ALSO INCREASES THE POTENTIAL FOR MOSQUITO PROBLEMS; THEREFORE, VEGETATION SHALL BE CONTROLLED AND CUT TO REDUCE MOSQUITO BREEDING.
- BREEDING.

  3. CONTACT THE CITY OF ALEXANDRIA ENVIRONMENTAL HEALTH VECTOR BORNE ILLNESS PROGRAM (703-838-4400 EXT. 326, 327) FOR QUESTIONS OR TREATMENT ASSISTANCE.





Job Title Client WASHINGTON POTOMAC YARD METROPOLITAN AREA METRORAIL STATION TRANSIT AUTHORITY Key Plan Drawing Title STANDARD NOTES SHEET 3 OF 37 JD TW 11/19/2018 Issue Date By Chkd

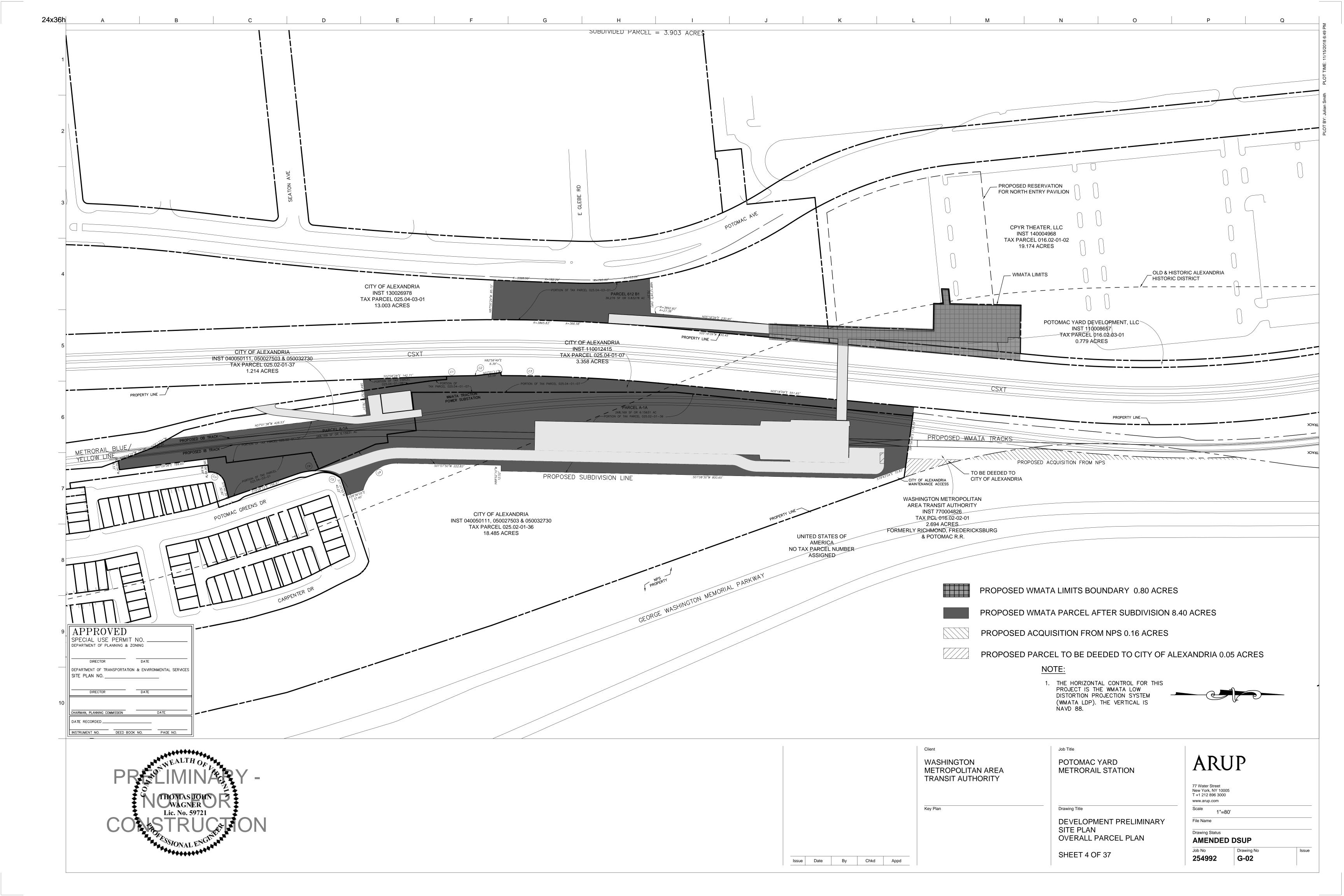
77 Water Street
New York, NY 10005
T +1 212 896 3000
www.arup.com
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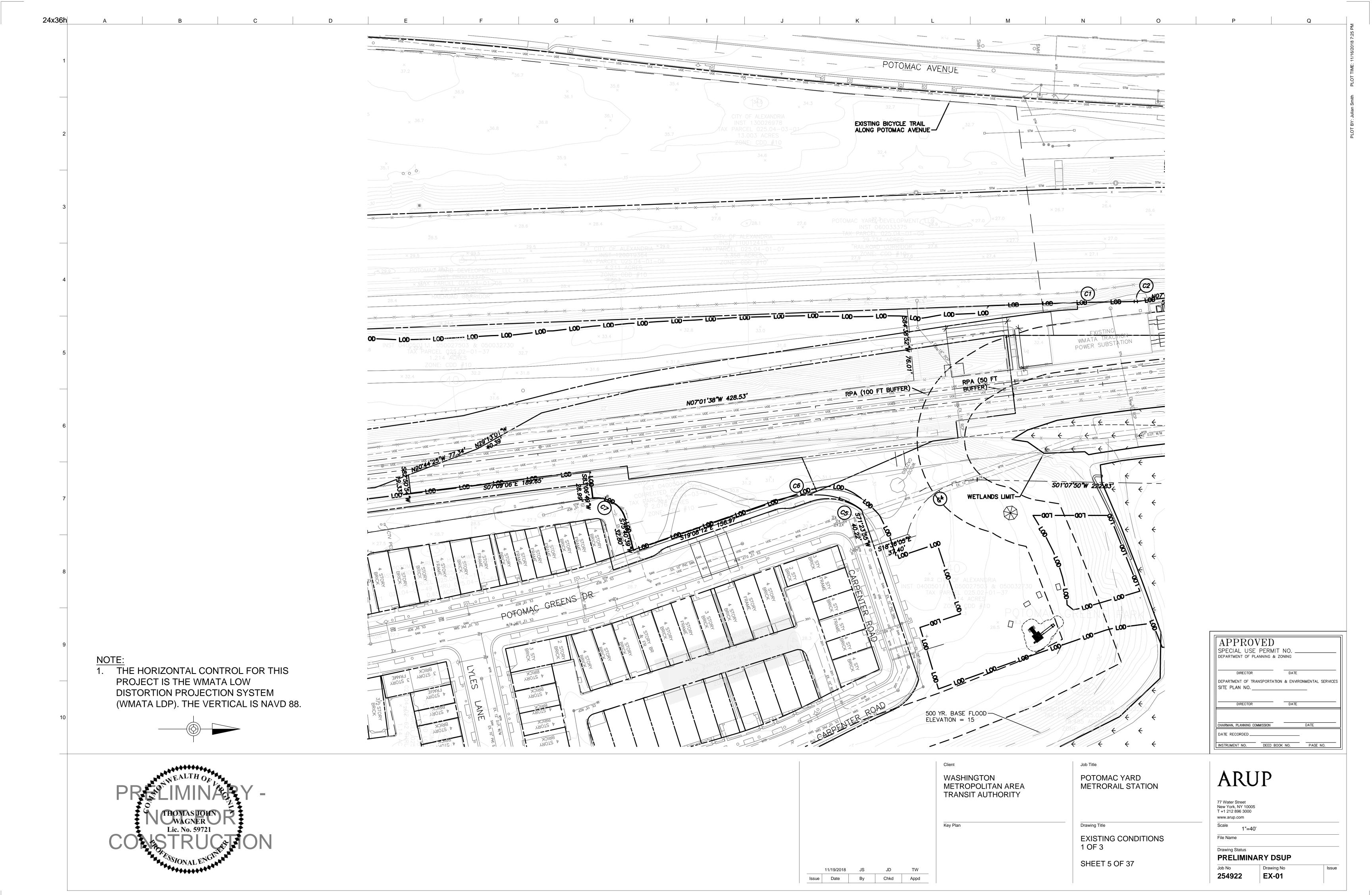
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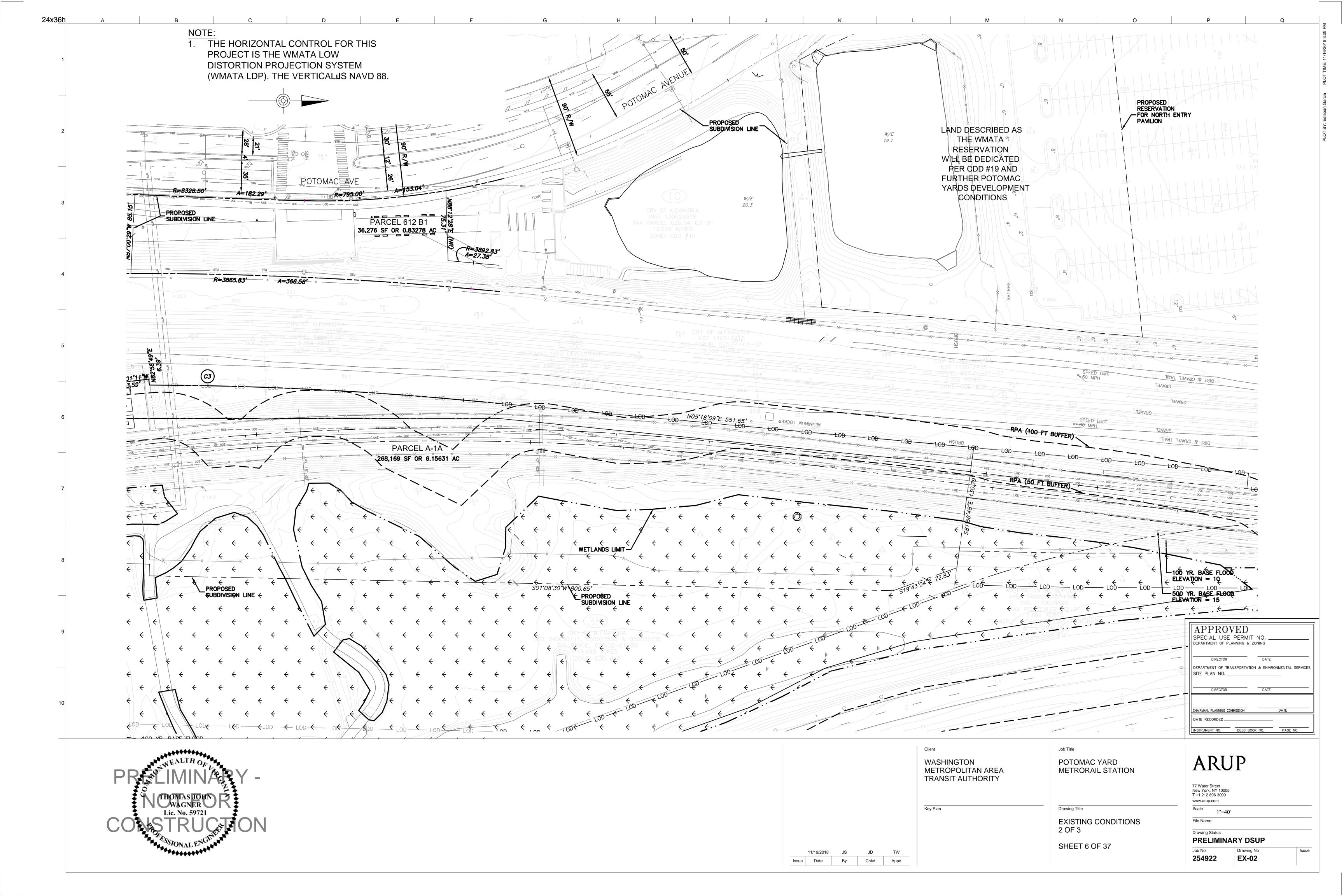
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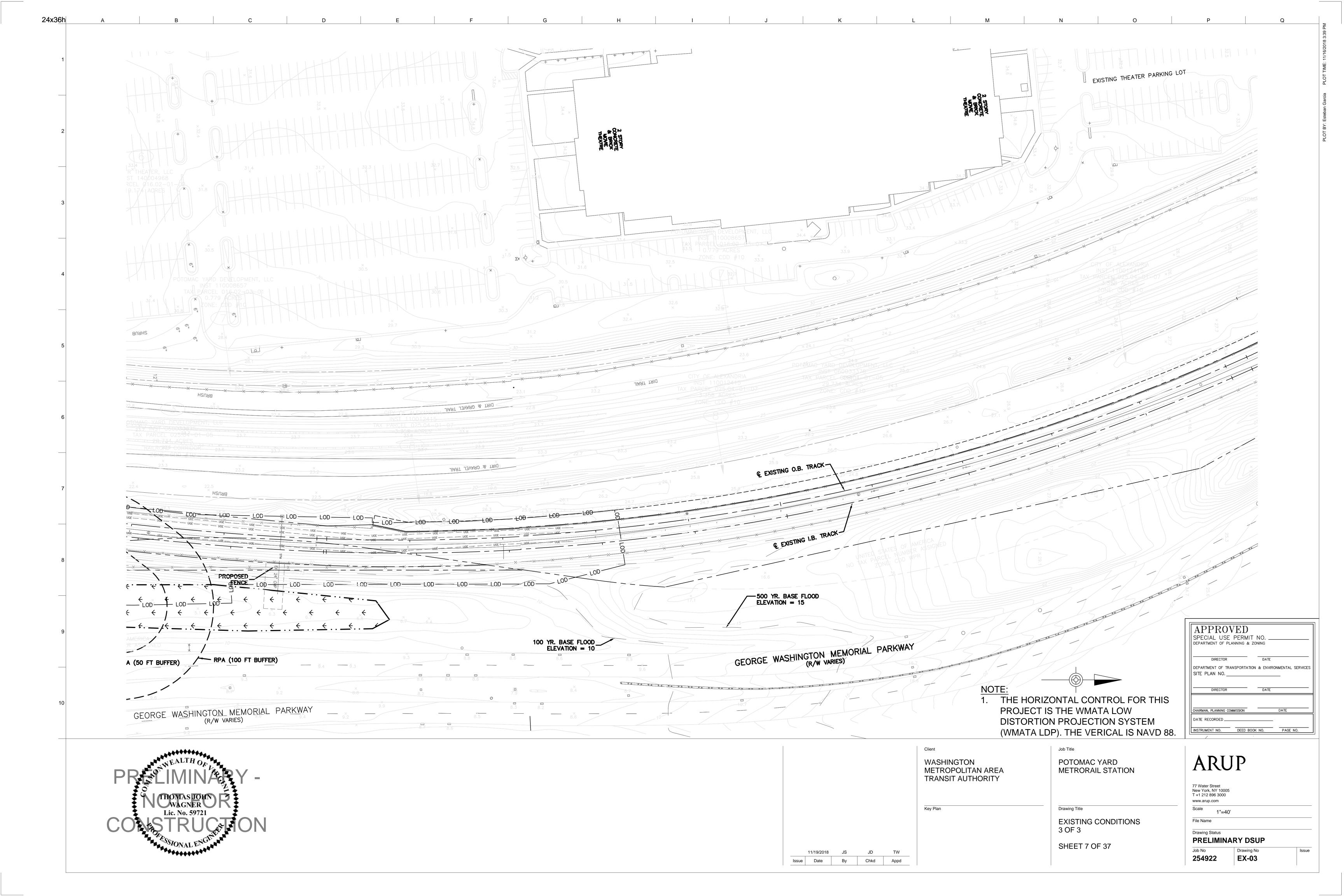
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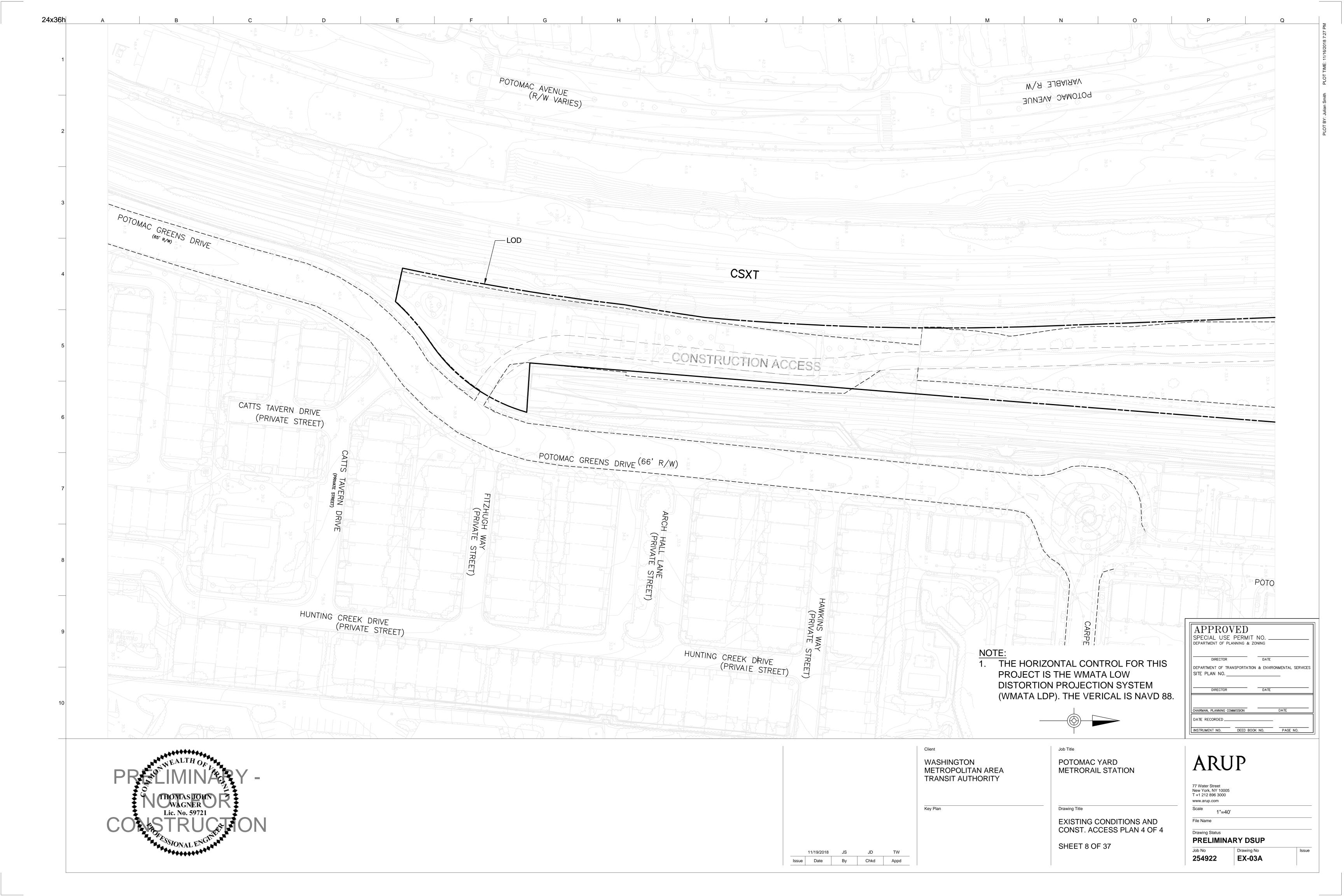
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Inv Num TBR/TBS Common Name

E F G H I J K L

Radius | Height Life\_Exp | Comments

Inv Num TBR/TBS Common Name Scientific Name

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Robinia pseudoacacia | 17.5 Feet | 45.00 | >15 | 3 leader - 1 dead, cavity at base black locust 11 Feet | 30.00 | 5-15 | vines 17 white mulberry Morus alba Robinia pseudoacacia 9.5 Feet 45.00 >15 18 black locust 19 8.5 Feet | 25.00 |>15 red cedar Juniperus virginiana black cherry 20 Prunus serotina 10.5 Feet | 28.00 |>15 Populus grandidentata 22 Feet 50.00 >15 bigtooth aspen Populus grandidentata 46.5 Feet 50.00 >15 22 bigtooth aspen 13 Feet | 35.00 |>15 23 white mulberry Morus alba 2 leaders, vine covered Robinia pseudoacacia 15.5 Feet 35.00 >15 24 tr vine covered engivy black locust 25 black locust Robinia pseudoacacia | 16.5 Feet | 40.00 | >15 | tr vine covered, cant see tr tree farthest from path-vine covered tr 26 Robinia pseudoacacia | 17.5 Feet | 50.00 | >15 black locust 27 Populus grandidentata 21.5 Feet 50.00 >15 bigtooth aspen 28 Populus grandidentata | 16.5 Feet | 50.00 | >15 bigtooth aspen Populus grandidentata 10 Feet 35.00 >15 29 bigtooth aspen Populus grandidentata | 12.5 Feet | 45.00 | >15 30 bigtooth aspen Populus grandidentata | 9.5 Feet | 35.00 | >15 bigtooth aspen 32 Populus grandidentata | 11 Feet | 45.00 |>15 bigtooth aspen Populus grandidentata | 17 Feet | 50.00 |>15 33 bigtooth aspen Populus grandidentata | 14.5 Feet | 45.00 | >15 34 vines, codom bigtooth aspen Populus grandidentata | 10.5 Feet | 45.00 | >15 35 bigtooth aspen bigtooth aspen |Populus grandidentata | 13.5 Feet | 55.00 | >15 37 bigtooth aspen Populus grandidentata 9 Feet 50.00 >15 sealed tr crack 38 eastern cottonwood | Populus deltoides 7.5 Feet | 35.00 |>15 phototrophic lean 26 Feet | 50.00 |>15 39 eastern cottonwood | Populus deltoides large basal wound, is sealing up over time 40 eastern cottonwood Populus deltoides 15 Feet | 50.00 |>15 41 eastern cottonwood Populus deltoides 18.5 Feet | 50.00 |>15 16 Feet 50.00 >15 42 eastern cottonwood Populus deltoides 43 eastern cottonwood | Populus deltoides 13 Feet | 45.00 |>15 44 eastern cottonwood | Populus deltoides 12.5 Feet | 40.00 |>15 22 Feet | 50.00 |>15 45 eastern cottonwood | Populus deltoides bayberry at base, codom 18.5 Feet | 50.00 |>15 eastern cottonwood | Populus deltoides 48 eastern cottonwood | Populus deltoides 17 Feet | 50.00 |>15 11.5 Feet | 45.00 |>15 invasive, check location via tree objid 49 ailanthus Ailanthus altissima 50 American elm 9.5 Feet | 20.00 |>15 Ulmus americana 51 Robinia pseudoacacia 20.5 Feet | 50.00 | 5-15 codom, many wounds on tr,vines black locust 52 ailanthus Ailanthus altissima 8.5 Feet | 35.00 |>15 invasive Robinia pseudoacacia | 15 Feet | 50.00 | <5 53 black locust tree falling apart 54 Robinia pseudoacacia 16 Feet 50.00 5-15 black locust center lead is hanging, dead 55 Siberian elm Ulmus pumila 22.5 Feet | 45.00 |>15 Robinia pseudoacacia 24.5 Feet 50.00 >15 56 2 trunks close together, vines black locust vines,codom black locust Robinia pseudoacacia 9.5 Feet 50.00 5-15 15.5 Feet | 45.00 |>15 58 Siberian elm Ulmus pumila 59 Platanus occidentalis 20 Feet 60.00 >15 American sycamore next to path 60 Robinia pseudoacacia 8 Feet 50.00 5-15 vine covered 61 Robinia pseudoacacia | 10.5 Feet | 50.00 |>15 codom, vine covered tr black locust 62 black locust Robinia pseudoacacia | 10 Feet | 50.00 | <5 tr splits Robinia pseudoacacia 5 Feet 35.00 <5 63 black locust declining Robinia pseudoacacia | 14 Feet | 50.00 | 5-15 64 black locust codon, tr splits, vines 65 black locust Robinia pseudoacacia | 10.5 Feet | 55.00 |>15 vines Robinia pseudoacacia 9 Feet 40.00 <5 leaning on other tree, lean increasing 66 black locust 67 black locust Robinia pseudoacacia 5 Feet 45.00 <5 totally vine covered xcept 4 top 68 eastern cottonwood Populus deltoides | 20.5 Feet | 60.00 |>15 18 Feet | 55.00 |>15 69 eastern cottonwood | Populus deltoides hanger, vines 12.5 Feet | 35.00 | <5 eastern cottonwood | Populus deltoides leaning, tr crack on tension side 7.5 Feet | 30.00 <5 crown broken apart 71 black willow Salix nigra eastern cottonwood Populus deltoides 72 15.5 Feet | 50.00 |>15 15 Feet | 35.00 | 5-15 black willow Salix nigra eastern cottonwood | Populus deltoides 74 24 Feet | 60.00 |>15 codom 26.5 Feet | 60.00 |>15 75 eastern cottonwood | Populus deltoides vines, some deadwood black willow Salix nigra 22 Feet | 40.00 |>15 77 12.5 Feet | 20.00 | 5-15 | totally vine covered white mulberry Morus alba white mulberry Morus alba | 12.5 Feet | 20.00 |>15 80 10.5 Feet | 35.00 |>15 vine covered red maple Acer rubrum 81 13 Feet | 50.00 |>15 eastern cottonwood Populus deltoides 82 eastern cottonwood 8.5 Feet | 40.00 |>15 10 Feet | 45.00 |>15 83 eastern cottonwood leaning, vines dragging down tree Populus deltoides eastern cottonwood 20.5 Feet | 60.00 |>15 Populus deltoides 85 9 Feet | 35.00 | <5 eastern cottonwood Populus deltoides leaning, many trunk wounds eastern cottonwood 86 9.5 Feet | 45.00 |>15 big lean towards creek eastern cottonwood | Populus deltoides 9.5 Feet | 55.00 |>15 88 eastern cottonwood 19.5 Feet | 60.00 |>15 Populus deltoides has small dead ldr at base 89 18 Feet | 55.00 |>15 eastern cottonwood Populus deltoides 90 21.5 Feet | 55.00 |>15 low branch that is nonw a leadr, in a low area eastern cottonwood | Populus deltoides eastern cottonwood | Populus deltoides 26.5 Feet | 55.00 |>15 in the shrubs eastern cottonwood 14.5 Feet | 55.00 |>15 93 12 Feet | 55.00 |>15 eastern cottonwood | Populus deltoides 15 Feet | 55.00 >15 eastern cottonwood Populus deltoides 95 eastern cottonwood Populus deltoides 19 Feet | 60.00 |>15 one Idr dead, not measured 96 eastern cottonwood 15 Feet | 50.00 |>15 Populus deltoides ldr reaching towards trax is dead, not measured eastern cottonwood | Populus deltoides 24.5 Feet | 60.00 |>15 2 separate trees close together so counted as one 98 12.5 Feet | 45.00 |>15 eastern cottonwood 99 25.5 Feet | 45.00 | 5-15 codom at 3', leaning towards tracks black locust Robinia pseudoacacia Populus deltoides 100 17.5 Feet | 55.00 |>15 eastern cottonwood 101 27.5 Feet | 50.00 |>15 black locust Robinia pseudoacacia codom at 8' 102 16 Feet | 30.00 | 5-15 covered in vines Ulmus sp. 103 14.5 Feet | 55.00 |>15 river birch Betula nigra 104 27 Feet | 60.00 |>15 eastern cottonwood | Populus deltoides 105 10.5 Feet | 50.00 |>15 17.5 Feet | 55.00 |>15 106 eastern cottonwood Populus deltoides 107 Populus deltoides eastern cottonwood 16.5 Feet | 60.00 |>15 108 19.5 Feet | 45.00 |>15 109 9 Feet | 55.00 |>15 no vines on tree eastern cottonwood | Populus deltoides 110 13.5 Feet | 45.00 |>15 river birch Betula nigra 111 18 Feet | 65.00 |>15 eastern cottonwood | Populus deltoides 14.5 Feet | 35.00 |>15 white mulberry Morus alba vines

C D

Scientific Name

Radius Height Life\_Exp Comments

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	Common Name	Scientific Name	Radius		Life_Exp	Comments
113	silver maple	Acer saccharinum	30 Feet		>15	4 main stems
114	black locust	Robinia pseudoacacia	16.5 Feet	60.00	>15	vines
115 116	london planetree	Robinia pseudoacacia Platanus - ù acerifolia	10 Feet 13 Feet	45.00 65.00	>15 >15	leaning, vines vines
116	eastern cottonwood	Populus deltoides	13 Feet	60.00	>15	vines
117	black cherry	Prunus serotina	6 Feet	25.00	<5	vine covered
119	black cherry	Prunus serotina	7.5 Feet	20.00	<5	vine covered
120	silver maple	Acer saccharinum	15 Feet	55.00	>15	
121	silver maple	Acer saccharinum	9.5 Feet	60.00	>15	vines
122	silver maple	Acer saccharinum	14.5 Feet	50.00	>15	1 small ldr broken out, vines
123	silver maple	Acer saccharinum	17 Feet	40.00	>15	vines
124	silver maple	Acer saccharinum	9 Feet	45.00	5-15	vines
125	silver maple	Acer saccharinum	12 Feet	40.00	>15	leaning, vines
126	black cherry	Prunus serotina	11 Feet	35.00	5-15	top dead, vines
127	river birch	Betula nigra	13 Feet	35.00	5-15	leaning, codom, vines
128	silver maple	Acer saccharinum	11.5 Feet	55.00	>15	vines
129	white mulberry	Morus alba	20 Feet		5-15	vine covered
130	silver maple	Acer saccharinum  Acer saccharinum	13.5 Feet		>15	.:
131	silver maple silver maple	Acer saccharinum  Acer saccharinum	10 Feet 10 Feet	30.00	5-15 <5	vine covered vine covered
133	silver maple	Acer saccharinum	19 Feet	50.00	>15	sharp fork codom
134	European hornbeam	Carpinus betulus	10 Feet	20.00	>15	take vines off, codom, prob planted
135	elm	Ulmus sp.	25.5 Feet	200000000000000000000000000000000000000	>15	codom, vib. dentatum at base
136	American elm	Ulmus americana	25 Feet	70.00	>15	vines
138	river birch	Betula nigra	5 Feet	30.00	5-15	declining, leaning against other tree
139	black locust	Robinia pseudoacacia	20 Feet		>15	vines
140	eastern cottonwood	Populus deltoides	17.5 Feet		>15	leaning towards trax, vines
141	European hornbeam	Carpinus betulus	10 Feet	40.00	>15	carpinus betulus probably
142	European hornbeam	Carpinus betulus	12 Feet	45.00	>15	right at end of fence
143	eastern cottonwood	Populus deltoides	17.5 Feet		>15	
144	river birch	Betula nigra	10 Feet	20.00		vines covering and pulling tree down, codom
145	eastern cottonwood	Populus deltoides	22.5 Feet	100000000000000000000000000000000000000	>15	
146	black willow	Salix nigra	13 Feet		5-15	1 ldr decling
147	black locust	Robinia pseudoacacia	14.5 Feet	60.00	>15	main ldr good, vines
148	black locust	Robinia pseudoacacia	5.5 Feet		5-15	leaning towards trax, small tr cav
149	black locust	Robinia pseudoacacia	20 Feet		>15	codoms, vines
150 151	black locust	Robinia pseudoacacia Robinia pseudoacacia	10 Feet 7.5 Feet	50.00	>15 5-15	dead br, vines, dead snapped tree adjacent
152	black locust	Robinia pseudoacacia	23 Feet	60.00	>15	codom,vines
153	black willow	Salix nigra	10 Feet		5-15	tree fell over and resprouted, interesting form, roots in air, covered in vines
154	eastern cottonwood	Populus deltoides	40 Feet	65.00	>15	Vines
155	eastern cottonwood	Populus deltoides	21 Feet	65.00	>15	
156	eastern cottonwood	Populus deltoides	18 Feet	70.00	>15	
157	ailanthus	Ailanthus altissima	10 Feet	55.00	>15	invasive exotic
158	silver maple	Acer saccharinum	13 Feet	30.00	>15	remove vines
159	black locust	Robinia pseudoacacia	24 Feet	60.00	>15	3 leader tree one leader has a broken branch another leader has a trunk wound
160	black locust	Robinia pseudoacacia	23.5 Feet	75.00	>15	3 leader tree, one dead ldr did not measure, vines
161	eastern cottonwood	Populus deltoides	17 Feet	65.00	>15	vines, codom from base
162	black locust	Robinia pseudoacacia	7.5 Feet	45.00	<5	leaning on other tree vines
163	sweetgum	Liquidambar styraciflua	10 Feet	45.00	>15	flagged
164	sweetgum	Liquidambar styraciflua	15 Feet	55.00	>15	carpinus in understory
165	ash .	Fraxinus sp.	8.5 Feet	45.00	<5	emerald ash borer
166	ash	Fraxinus sp.	16 Feet	55.00	<5	EAB?
167	pin oak	Quercus palustris	24 Feet		>15	original planting
168 169	American elm	Ulmus americana	14.5 Feet	40.00 45.00	>15 >15	two trees but close together
170	European hornbeam ash	Carpinus betulus Fraxinus sp.	16 Feet 7.5 Feet	45.00	<5	English ivy on trunk all ash have EAB
171	ash	Fraxinus sp.	15 Feet	60.00	<5	all asit flave LAD
172	ash	Fraxinus sp.	5 Feet	40.00	<5	
173	elm	Ulmus sp.	9 Feet	25.00	5-15	vine covered
174	ash	Fraxinus sp.	25 Feet	70.00	<5	codom
175	white mulberry	Morus alba	9 Feet		>15	
176	black cherry	Prunus serotina	5 Feet		5-15	growing into fence damaging fence
177	elm	Ulmus sp.	11.5 Feet	55.00	>15	many trunk cracks that have sealeld over
178	elm	Ulmus sp.	9 Feet	-	5-15	
179	white pine	Pinus strobus	13.5 Feet		5-15	covered in vines
180	European hornbeam	Carpinus betulus	12.5 Feet		>15	many carpinus in understory in this area
181	red maple	Acer rubrum	21.5 Feet	_	>15	3 major ldrs, tr cav at base, vines
182	ash	Fraxinus sp.	10 Feet	55.00	<5	
183	elm willow eak	Ulmus sp.	8.5 Feet	50.00	>15	covered in vines, many small arrowwood viburnum in area
184	willow oak	Quercus phellos	7.5 Feet		5-15 >15	vines
185 186	sweetgum river birch	Liquidambar styraciflua Betula nigra	9 Feet 14.5 Feet		>15	slight lean towards Road
187	river birch	Betula nigra	7 Feet	45.00	>15	Singlife reality towards noad
188	sweetgum	Liquidambar styraciflua	7 Feet	50.00	<5	large tr wound at 10'
189	ash	Fraxinus sp.	5.5 Feet	40.00	<5	- Bernard Control
190	sweetgum	Liquidambar styraciflua	9 Feet		>15	trunk is bowed
191	silver maple	Acer saccharinum	8 Feet	45.00	>15	
192	sweetgum	Liquidambar styraciflua	6 Feet	40.00	>15	
193	ash	Fraxinus sp.	7 Feet	45.00	<5	
194	ash	Fraxinus sp.	15 Feet	50.00	<5	
195	red maple	Acer rubrum	9.5 Feet	40.00	<5	extremely large trunk opening
196	silver maple	Acer saccharinum	6 Feet	45.00	<5	large trunk beam crack
197	silver maple	Acer saccharinum	11 Feet	45.00	>15	growing through fence, fence down
198	elm	Ulmus sp.	20 Feet		5-15	lotsa canopy dieback
199	ash	Fraxinus sp.	17.5 Feet		<5	was 5 ldrs, falling apart
200	willow oak	Quercus phellos	8 Feet	35.00	>15	remove Vines to extend life expectancy
201	white pine	Pinus strobus	13.5 Feet	<del>                                     </del>	>15	vines
202	white mulberry	Morus alba	18.5 Feet		>15	vines
203	silver maple	Acer saccharinum	7.5 Feet	35.00	>15	Isoming sould those mentes he wildings 2.2 let at the
agence 4	silver maple	Acer saccharinum Acer saccharinum	14.5 Feet	45.00	>15	leaning-could these maples be cultivars? 3 lobed lvs
205	cilvor man-1-	THE PERSON CONTINUES	14 Feet	40.00	>15	Old trunk wound at base ceiling over
206	silver maple		145	CO 00	-E	
206 207	ash	Fraxinus sp.	14 Feet	60.00	<5 >15	took niv of luc
206			14 Feet 18 Feet 5.5 Feet	55.00	<5 >15 <5	took pix of lvs branch canker

inv Num	IBK/IBS	Common Name	Scientific Name	Radius			Comments
210		ash	Fraxinus sp.	7 Feet		<5	T.
211		ash	Fraxinus sp.	5 Feet	35.00	<5	vines
212		maple	Acer sp.	10 Feet	55.00	<5	almost dead
213		red maple	Acer rubrum	15.5 Feet	55.00	>15	codom
214		ash	Fraxinus sp.	10.5 Feet	60.00	<5	on track side of fence
215		ash	Fraxinus sp.	10.5 Feet	30.00	<5	vine covered
216	*	silver maple	Acer saccharinum	5 Feet	30.00	<5	vine covered
					17000/20191999		
217		ash	Fraxinus sp.	5 Feet	35.00	<5	vine covered
218		quaking aspen	Populus tremuloides	4 Feet	20.00	<5	vine covered
219		willow oak	Quercus phellos	9.5 Feet	30.00	>15	re vines
220		ash	Fraxinus sp.	10 Feet	40.00	<5	vines
221		silver maple	Acer saccharinum	20 Feet	65.00	>15	vines
223		ash	Fraxinus sp.	6 Feet	35.00	<5	
224		ash	Fraxinus sp.	8 Feet	30.00	<5	severe lean, vines
225		ash	Fraxinus sp.	8 Feet	45.00	<5	severe reall, villes
226		silver maple	Acer saccharinum	11.5 Feet	30.00		wierd shape
227		silver maple	Acer saccharinum	7.5 Feet	30.00	>15	
228		silver maple	Acer saccharinum	10 Feet	35.00	>15	
229	1	silver maple	Acer saccharinum	8.5 Feet	50.00	>15	roots at the base hold up indicating partial failure
230	1	ash	Fraxinus sp.	10.5 Feet	50.00	<5	
231	5	ash	Fraxinus sp.	8 Feet	50.00	<5	
232	· ·	ash	Fraxinus sp.	6.5 Feet	50.00	<5	
			The state of the s				Vines pulling tree days
233	,	ash	Fraxinus sp.	6.5 Feet	25.00	<5	Vines pulling tree down
234		silver maple	Acer saccharinum	11 Feet		5-15	hangar in crown
235		silver maple	Acer saccharinum	15.5 Feet	45.00	>15	vines
236		silver maple	Acer saccharinum	7.5 Feet	35.00	<5	one leader long extended
237		silver maple	Acer saccharinum	22 Feet	50.00	5-15	large trunk wound at base tree is leaning
238		silver maple	Acer saccharinum	14.5 Feet		5-15	large hole at trunk good wildlife tree
239		ash	Fraxinus sp.	5 Feet	30.00	<5	go at the majora milanic tice
240		ash	Fraxinus sp.	9 Feet	35.00	<5	
241		eastern cottonwood	Populus deltoides	38 Feet	10000000000	>15	codom
242		black locust	Robinia pseudoacacia	16.5 Feet	55.00	>15	vines
243	1	black locust	Robinia pseudoacacia	12 Feet	40.00	5-15	vines
244		black locust	Robinia pseudoacacia	10 Feet	45.00	5-15	vines
245		eastern cottonwood	Populus deltoides	30 Feet		>15	codom
246		silver maple	Acer saccharinum	17 Feet	45.00		many cavities at base
							Iniany cavities at base
247		silver maple	Acer saccharinum	12.5 Feet		5-15	
248		silver maple	Acer saccharinum	15 Feet		5-15	hollow tree, been chewed by beavers awhile ago
249		willow oak	Quercus phellos	15 Feet	50.00	>15	10 feet from Pine
250		white pine	Pinus strobus	12 Feet	65.00	>15	old tr wound sealing up
251		silver maple	Acer saccharinum	9.5 Feet	35.00	>15	vines
252		london planetree	Platanus -ù acerifolia	10 Feet	50.00	<5	almost dead, can fall on road
253		black locust	Robinia pseudoacacia	7.5 Feet		>15	leaning over path
254		black locust	Robinia pseudoacacia	7 Feet	40.00	>15	leaning over path
			· · · · · · · · · · · · · · · · · · ·				
255		black locust	Robinia pseudoacacia	9.5 Feet	45.00	>15	leaning over path
256		box elder maple	Acer negundo	6.5 Feet	30.00		
257		black locust	Robinia pseudoacacia	7.5 Feet	50.00	<5	trunk wounds, small canopy
258		black locust	Robinia pseudoacacia	6 Feet	50.00	>15	
259		black locust	Robinia pseudoacacia	17.5 Feet	50.00	>15	English ivy on trunk
260		black locust	Robinia pseudoacacia	10 Feet	50.00	>15	
261		black locust	Robinia pseudoacacia	13 Feet	50.00	>15	ivy, codom
262		black locust	Robinia pseudoacacia	5 Feet		>15	
			<del></del>	+		PC P	eng ivy
263		black locust	Robinia pseudoacacia	9.5 Feet	45.00		was a codom, one ldr dead
264		Siberian elm	Ulmus pumila	15.5 Feet	40.00	>15	
265		box elder maple	Acer negundo	12.5 Feet	45.00	>15	codom at 5'
266		white mulberry	Morus alba	17.5 Feet	45.00	>15	codom
267		white mulberry	Morus alba	19 Feet	35.00	>15	
268		white mulberry	Morus alba	11.5 Feet		5-15	3 leaders, Vines covering canopy
269		eastern cottonwood	Populus deltoides	29.5 Feet		>15	on edge of path
-		95 95000 10					100 1 200 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
270		eastern cottonwood	Populus deltoides	33.5 Feet	100000000000000000000000000000000000000	>15	adjacent to path
271		silver maple	Acer saccharinum	10 Feet	40.00	<5	covered in vines
272		silver maple	Acer saccharinum	8 Feet		5-15	top dead
273		silver maple	Acer saccharinum	10 Feet	25.00	5-15	leaning towards Road
274		white mulberry	Morus alba	9.5 Feet	30.00	5-15	vines
275		white pine	Pinus strobus	9 Feet	60.00		
277		white mulberry	Morus alba	12.5 Feet	45.00		
279		swamp white oak	Quercus bicolor	24.5 Feet	75.00		rubbing against pine, mother of all swamp white oaks
		•					
280		white mulberry	Morus alba	10 Feet	30.00		covered in vines, leaning
281		white mulberry	Morus alba	7.5 Feet	35.00		leaning towards Road
282		white mulberry	Morus alba	5 Feet	20.00	<5	covered in vines
283		ash	Fraxinus sp.	16 Feet	65.00	<5	6 feet from Creek
284		red maple	Acer rubrum	23 Feet	75.00		near outflow
285		white mulberry	Morus alba	10 Feet	40.00		
		white mulberry	Morus alba	9 Feet	35.00		Control of the Property of the
286		American sycamore	Platanus occidentalis	7 Feet	45.00	<5	not much living growth
286 287			_	9.5 Feet	35.00	5-15	right next to Sycamore
286		elm	Ulmus sp.	9.5 reet			
286 287		elm white mulberry	Ulmus sp. Morus alba	8 Feet	25.00	>15	
286 287 288 289		white mulberry	Morus alba	8 Feet	25.00		top broken out
286 287 288			<del>                                     </del>			5-15	top broken out top broken out

TREE LOCATED ON CITY OF ALEXANDRIA PROPERTY TREE LOCATED ON NATIONAL PARK SERVICE PROPERTY TBR - TREE TO BE REMOVED TBS - TREE TO BE SAVED



ARUP

77 Water Street New York, NY 10005 T +1 212 896 3000 www.arup.com

Scale 1"=40'

Drawing Status

254922

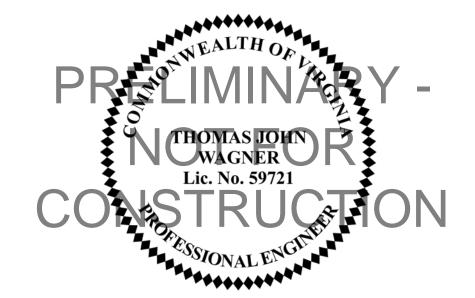
PRELIMINARY DSUP

**EX-05** 

Issue

Α

File Name



					Client	Job Title POTOMAC YARD
					METROPOLITAN AREA TRANSIT AUTHORITY	METRORAIL STATION
					Key Plan	
						TREE SURVEY LEGEND
	11/19/2018	JS	JD	TW		SHEET 10 OF 38
Issue	Date	By	Chkd	Appd		